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TO

EASTER TERM, 1884.

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UNIVERSITY OF CAMBRIDGE.

SANITARY SCIENCE EXAMINATION.

TUESDAY, *October* 2, 1883. 9 A.M. to 12 M.

PART I. PAPER I.

1. WHAT is the composition of Urea, and what changes does it undergo after excretion? How much is passed daily by an average adult, and how much would be excreted per annum by a mixed population of 10,000 persons?

2. How much Sodium Chloride per 100,000 parts is there in sea-water? In a certain part of a tidal river the amount of Sodium Chloride is 5·7 per 100,000, the average proportion of Chlorine in the fresh-water, sewage, &c. that find their way into it is 2 per 100,000; find the proportion of sea-water in the total volume of the stream at the place and time of observation.

3. A circular ward with a dome-shaped roof requires to be measured. The diameter is 36 feet; the height to the centre of the roof is 18 feet, and the height of the walls is 12 feet. Find the floor space and total cubic contents. How many patients would you put in such a ward? Compare the advantages and disadvantages of circular and rectangular wards from a theoretical point of view.

4. It is wished to give 2000 cubic feet of air per head per hour in a room of 8000 cubic feet capacity, occupied by 14 persons; would this be feasible?

How much sectional area of inlet and outlet opening would be required by each individual? Would the ventilation be sufficient?

5. Describe a Rain-gauge and the precautions necessary in placing and observing it.

What is the average rainfall in England proper?

If $\frac{1}{8}$ of an inch of rain falls in 10 minutes, how much water would this give per square mile in 24 hours at the same rate? State the result in cubic feet, gallons and tons.

6. What is the source of energy in the human frame? How is work usually expressed? How much work is done by a man walking at an ordinary velocity a distance of 15 miles on an ascent of 1 in 200; weight of man and what he carries 12 stone 8 lbs.?

WEDNESDAY, *October* 3, 1883. 9 A.M. to 12 M.

PART I. PAPER II.

1. Of what importance is the determination (*a*) of Chlorine, (*b*) of Nitric Acid in a drinking water? Describe any one method for determining the Nitric Acid.

2. Describe in detail Pettenkofer's process for the estimation of Carbonic Acid in the air; giving an example.

3. Give your opinion, with your reasons for it, on the quality of each of the examples of water which gave the following results on analysis:

PARTS PER 100,000				
Total Solids	Chlorine	Nitrogen as Nitrates	Ammonia	Organic Nitrogen
30·63	2·94	0·717	·003	·014
85·12	11·25	2·279	0	·048
2·95	0·22	0·003	·029	·015
23·50	2·15	0·456	·154	·026

4. Classify the various Chemical processes that have been proposed for the purification of Sewage, and discuss the rationale of each.

5. What principles must be followed in the construction and ventilation of House Drains? If a 9 inch drain with a fall of 1 in 200 gives a velocity of 3 feet per second, what fall must it have to give a velocity of 6 feet per second, the drain running half full in each case?

6. An outbreak of disease takes place in a town of 57,000 inhabitants; 1340 cases occur in 29 days, and of these 712 die; what are the proportions of cases and of deaths per thousand of the population for the period, and also per annum at the same rate?

THURSDAY, *October* 4, 1883. 9 A.M. to 12 M.

PART II. PAPER I.

1. WHAT are the circumstances to be guarded against when you are called upon to advise regarding "ground air"? What may its influence be upon (1) A given district, (2) A given house, and how are those influences brought into play?

2. How may statistical evidence regarding death-rates be misleading if the social habits of the people are not taken into account? Discuss the influence of age, occupation, character of lodging accommodation and locality upon the death-rate of a given town.

3. A stated manufacturing process giving off organic effluvia is in your opinion a nuisance, and injurious to health: give the reasons for your opinion, and the steps which should be taken to remedy the mischief.

4. There is an outbreak of Scarlatina in a large establishment containing 900 children, it has existed for several months, repeated attempts have been made without permanent good effect to prevent its recurrence. What steps would you advise to get rid of the disease from such an establishment?

5. Give the reasons why certain occupations are classed as unhealthy. What diseases are likely to arise from those occupations? Give three examples of the measures which should be taken to prevent their incidence.

6. What is the nature of the provisions in the Public Health Act, 1875, which apply to factories? How, and by whom, are they to be enforced?

FRIDAY, *October* 5, 1883. 9 A.M. to 12 M.

PART II. PAPER II.

1. What diseases would you include as causes of preventible deaths? What means has a Medical Officer of Health to diminish the mortality caused by each of them respectively?

2. What causes may be assigned for the diminution which has taken place of late years in the number of cases of typhus, and in the extent of its prevalence as an epidemic disease?

3. When a population is stationary during a term of years, what difference is likely to be found in the birth-rate, and in the death-rate of infancy and old age, as compared with corresponding rates in a rapidly increasing population? What influence has a high birth-rate on the death-rate?

4. For what purposes has a Local Authority power to make bye-laws with respect to houses let in lodgings? What advantages may be gained by adopting this provision of the Public Health Act?

5. What is in your opinion the best method for the disposal of sewage? Describe the difficulties likely to be met with in carrying out this system in large and in small towns respectively.

6. Give a short summary of the duties of a Medical Officer of Health, and those of an Inspector of Nuisances.

REGULATIONS

FOR THE

EXAMINATION IN SANITARY SCIENCE

OF THE

UNIVERSITY OF CAMBRIDGE.

An Examination in so much of State Medicine as is comprised in the functions of Officers of Health, will be held yearly in Cambridge, beginning on the first Tuesday in October, and ending on the following Friday afternoon.

Any person whose name is on the Medical Register of the United Kingdom may present himself for this examination provided he be in his 24th year at least when he presents himself for Part I., and have attained 24 years of age before he presents himself for Part II.

The Examination will be in two parts.

Part I. will comprise:—Physics and Chemistry. The principles of Chemistry, and methods of analysis with especial reference to analyses of air and water. Application of the microscope. The laws of heat, and the principles of pneumatics, hydrostatics and hydraulics, with especial reference to ventilation, water-supply, drainage, construction of dwellings, disposal of sewage and refuse, and sanitary engineering in general. Statistical Methods.

Part II. will comprise:—Laws of the realm relating to public health. Origin, propagation, pathology, and prevention of epidemic and infectious diseases. Effects of overcrowding, vitiated air, impure water and bad or insufficient food. Unhealthy occupations and the diseases to which they give rise. Water-supply and drainage in reference to health. Nuisances injurious to health. Distribution of diseases within the United Kingdom, and effects of soil, season and climate.

The examination in both parts will be oral and practical as well as in writing.

Candidates may present themselves for either part separately or for both together at their option; but the result of the examination in the case of any candidate will not be published until he has passed to the satisfaction of the Examiners in both parts.

Every candidate will be required to pay a fee of four guineas before admission to *each part* of the examination.

Every candidate who has passed both parts of the examination to the satisfaction of the Examiners will receive a certificate testifying to his competent knowledge of what is required for the duties of a Medical Officer of Health.

All applications for admission to this examination, or for information respecting it, should be addressed to Professor Liveing, Cambridge.

Candidates who desire to present themselves for examination in October next, must send in their applications, and transmit the fees, to Professor Liveing, Cambridge, on or before Sept. 28. Cheques should be crossed "Mortlock and Co." No fees can in any case be returned.

The applications of candidates, whose names have not been on the register three years, should be accompanied by a Certificate of Birth, or other proof of age.

The following suggestions have been drawn up by the Syndicate for superintending the Examination in State Medicine as some guide to candidates preparing for that Examination.

PART I. The principles of Chemistry are sufficiently set forth in any of the ordinary manuals. Candidates will be expected to understand the application of the general laws to such cases as occur in the practice of an Officer of Health, but will not be expected to shew an acquaintance with those details of Chemistry which have no direct bearing on sanitary questions. No importance will be attached to the use of any particular chemical notation. It is not expected that Officers of Health will in general be able to act as public analysts, but that they will know the methods of analysis and be able to interpret correctly the results of professional analysis. The kinds of applications of the several sciences of which the candidates are expected to shew a competent knowledge will be best understood by a perusal of Parkes's *Manual of Practical Hygiene.* In the actual analysis of water and air candidates will not be expected to make complete quantitative analyses, but to know how to apply ordinary chemical methods for the detection and discrimination of mineral and organic substances in the samples. Candidates will be expected to shew a practical acquaintance with the use of the microscope.

PART II. Candidates will be expected to shew an acquaintance with the sanitary laws in force in England; but if any candidate has information respecting alternative laws in force in the Metropolis or in Scotland or in Ireland, opportunity will be given him, alternatively, of shewing his acquaintance with such laws.

The rest of Part II., besides the subjects expressly mentioned, is to be understood as including those of Vaccination, Disinfectants, the management of outbreaks of Infectious Diseases, with the construction of Hospitals temporary or permanent; Endemic Diseases; Birth-rates and Death-rates; the qualities and suitableness of various Waters used for domestic purposes; the inspection of factories, mines, workshops and common lodging-houses.

The following list of works, with the names of the publishers, will probably be found valuable to some of the candidates, but the necessity of reading all or any one of them is not urged upon them.

On Parts I. and II.

Parkes's *Manual of Practical Hygiene.* Churchill.

G. Wilson's *Handbook of Hygiene.* Churchill.

Grimshaw and others, *Manual of Public Health for Ireland.* Fannin, Dublin; and Longmans.

Cameron's *Manual of Hygiene.* Hodges, Foster and Co., Dublin, and Baillière, Tindall and Cox.

Seaton's *Handbook of Vaccination.* Macmillan.

*Army Medical Reports. *Reports on Hygiene.* Eyre and Spottiswoode.
*Reports to Privy Council and Local Government Board by their Medical Officer. Eyre and Spottiswoode.

On Chemistry. General principles.

Fownes' *Manual of Chemistry.* Churchill.
Bloxam's *Chemistry.* Churchill.
Roscoe's *Lessons in Elementary Chemistry.* Macmillan.
Attfield's *Chemistry.* Van Voorst.

On Analysis.

Bloxam's *Laboratory Teaching.* Churchill.
Bowman's *Practical Chemistry.* Churchill.
Sutton's *Systematic Handbook of Volumetric Analysis.* Churchill.
Frankland's *Water Analysis for Sanitary purposes.* Van Voorst.
Wanklyn and Chapman's *Water Analysis.* Trübner.
Hartley's *Air and its Relations to Life.* Longmans.
Wanklyn *Milk Analysis.* Trübner.
Wanklyn and Cooper's *Bread Analysis.* Trübner.
Fox, C. *Sanitary Examinations of Water, Air and Food.* Churchill.

On Physics.

Todhunter's *Natural Philosophy for Beginners.* Macmillan.
Ganot's *Physics.* Longmans.
Everett's *Textbook of Physics.* Blackie.

On Microscopy.

Carpenter's *The Microscope and its Revelations.* Churchill.
Macdonald's *Guide to Microscopical Examination of Drinking Water.* Churchill.
*Hassall's *Food and its Adulterations.* Longmans.

On Sanitary Engineering, Water Supply, Sewage, &c.

Eassie's *Sanitary Arrangement for Dwellings.* Smith, Elder and Co.
Galton's *Healthy Dwellings.* Macmillan.
Corfield's *Dwelling Houses, their Sanitary Construction and Arrangement.* Lewis.
*Bailey-Denton, *Sanitary Engineering.* Spon.
*Latham's *Sanitary Engineering.* Spon.
*Bayles' *House drainage and water service.* Williams, New York.
Tomlinson's *Warming and Ventilation.* Lockwood.
Corfield's *Treatment and Utilization of Sewage.* Macmillan.
*Report of Committee appointed by President of Local Government Board on modes of treating Town Sewage. Eyre and Spottiswoode.
*Reports of Royal Commission on Pollution of Rivers, especially the 6th on Domestic Water Supply. Eyre and Spottiswoode.
*Report from Select Committee on Public Health Act (1875) Amendment Bill, with the Evidence. Eyre and Spottiswoode.
*R. Angus Smith's *Air and Rain.* Longmans.
*Ure's *Dictionary of Arts, Manufactures and Mines.* Longmans.

On the Laws of the Realm and Bye-laws relating to Public Health.

For England:

Public Health Act, 1875, and the Acts of Parliament relating to the various subject-matters within the domain of Hygiene passed since that date.
Artisans' and Labourers' Dwellings Acts.
Vaccination Acts.

For the Metropolis, or for Scotland, or for Ireland:

Laws dealing with the same subject-matters as the above, and having application to the particular part of the United Kingdom.

Model Bye-laws of the Local Government Board. Eyre and Spottiswoode.
Adulteration of Food and Drugs Acts.

On Statistics.

Lewis's *Digest of the English Census.* Stanford.

The article on 'Statistics' in the *Cyclopædia of Anatomy and Physiology.* Longmans.

*Dr Farr's letters to the Registrar-General in the early Reports of the Registrar-General.

*Reports of the Registrar-General. Eyre and Spottiswoode.

*Deaths in England. Average Annual Proportion of Deaths, &c. 1861—70. Parliamentary Paper C. 874 Session 1873. Eyre and Spottiswoode; and may be had also of Hansard, or of King, King St., Westminster.

On construction of Hospitals.

Miss Nightingale's *Notes on Hospitals.* Longmans.

Oppert's *Hospitals, Infirmaries and Dispensaries, their construction, interior arrangement and management.* Churchill.

Galton, *On the construction of Hospitals.* Macmillan.

Burdett, *Cottage Hospitals.* Churchill.

*De Chaumont. *Hospitals* in the Encyclopædia Britannica, last edition.

* The books thus marked are books of reference.

*** *The Examination Papers set at former examinations can be obtained at the Cambridge University Press Warehouse,* 17, *Paternoster Row, London, price* 1*s. each set, or by post* 1*s.* 2*d.*

CARUS GREEK TESTAMENT PRIZES.

THURSDAY, *November* 15, 1883. 9—12.

BACHELORS.

1. WHAT are the probable dates at which the several Gospels were written? Give your reasons for assigning the date in each case.

2. Shew the importance of Justin Martyr's writings and of Tatian's Diatessaron in the History of the N. T. Canon.

3. Discuss *one* of the following questions:

(*a*) On what grounds is it said that the Gospel of St Luke and the Acts of the Apostles were written by the same hand?

(*b*) From what internal evidence does it appear probable that the author of the Fourth Gospel was a Jew of Palestine?

4. What traces do we find of the embodiment of written or oral tradition in the Historical books of the New Testament?

5. *Either* write a careful analysis of one of the Gospels showing its plan and purpose, *or* estimate the importance of prophecy and miracle in the Gospel narrative.

6. Translate with short notes *five* of the following:

(*a*) καὶ ἐλθὼν εἰς τὴν πατρίδα αὐτοῦ ἐδίδασκεν αὐτοὺς ἐν τῇ συναγωγῇ αὐτῶν, ὥστε ἐκπλήσσεσθαι αὐτοὺς καὶ λέγειν Πόθεν τούτῳ ἡ σοφία αὕτη καὶ αἱ δυνάμεις; οὐχ οὗτός ἐστιν ὁ τοῦ τέκτονος υἱός; οὐχ ἡ μήτηρ αὐτοῦ λέγεται Μαριὰμ καὶ οἱ ἀδελφοὶ αὐτοῦ Ἰάκωβος καὶ Ἰωσὴφ καὶ Σίμων καὶ Ἰούδας; καὶ αἱ ἀδελφαὶ αὐτοῦ οὐχὶ πᾶσαι πρὸς ἡμᾶς εἰσίν; πόθεν οὖν τούτῳ ταῦτα πάντα; καὶ ἐσκανδαλίζοντο ἐν αὐτῷ. ὁ δὲ Ἰησοῦς εἶπεν αὐτοῖς Οὐκ ἔστιν προφήτης ἄτιμος εἰ μὴ ἐν τῇ πατρίδι καὶ ἐν τῇ οἰκίᾳ αὐτοῦ. Καὶ οὐκ ἐποίησεν ἐκεῖ δυνάμεις πολλὰς διὰ τὴν ἀπιστίαν αὐτῶν.

(*b*) καὶ εὐθὺς ἦν ἐν τῇ συναγωγῇ αὐτῶν ἄνθρωπος ἐν πνεύματι ἀκαθάρτῳ, καὶ ἀνέκραξεν λέγων Τί ἡμῖν καὶ σοί, Ἰησοῦ Ναζαρηνέ; ἦλθες ἀπολέσαι ἡμᾶς; οἶδά σε τίς εἶ, ὁ ἅγιος τοῦ θεοῦ. καὶ ἐπετίμησεν αὐτῷ ὁ Ἰησοῦς λέγων Φιμώθητι καὶ ἔξελθε ἐξ αὐτοῦ. καὶ σπαράξαν αὐτὸν τὸ πνεῦμα τὸ ἀκάθαρτον καὶ φωνήσαν φωνῇ μεγάλῃ ἐξῆλθεν ἐξ αὐτοῦ. καὶ ἐθαμβήθησαν ἅπαντες, ὥστε συνζητεῖν αὐτοὺς λέγοντας Τί ἐστιν τοῦτο; διδαχὴ καινή· κατ' ἐξουσίαν καὶ τοῖς πνεύμασι τοῖς ἀκαθάρτοις ἐπιτάσσει, καὶ ὑπακούουσιν αὐτῷ. Καὶ ἐξῆλθεν ἡ ἀκοὴ αὐτοῦ εὐθὺς πανταχοῦ εἰς ὅλην τὴν περίχωρον τῆς Γαλιλαίας.

(c) καὶ σὺ δέ, παιδίον, προφήτης Ὑψίστου κληθήσῃ, προπορεύσῃ γὰρ ἐνώπιον Κυρίου ἑτοιμάσαι ὁδοὺς αὐτοῦ, τοῦ δοῦναι γνῶσιν σωτηρίας τῷ λαῷ αὐτοῦ ἐν ἀφέσει ἁμαρτιῶν αὐτῶν, διὰ σπλάγχνα ἐλέους θεοῦ ἡμῶν, ἐν οἷς ἐπισκέψεται ἡμᾶς ἀνατολὴ ἐξ ὕψους, ἐπιφᾶναι τοῖς ἐν σκότει καὶ σκιᾷ θανάτου καθημένοις, τοῦ κατευθῦναι τοὺς πόδας ἡμῶν εἰς ὁδὸν εἰρήνης. Τὸ δὲ παιδίον ηὔξανε καὶ ἐκραταιοῦτο πνεύματι, καὶ ἦν ἐν ταῖς ἐρήμοις ἕως ἡμέρας ἀναδείξεως αὐτοῦ πρὸς τὸν Ἰσραήλ.

(d) ἐκεῖνος δὲ ὁ δοῦλος ὁ γνοὺς τὸ θέλημα τοῦ κυρίου αὐτοῦ καὶ μὴ ἑτοιμάσας ἢ ποιήσας πρὸς τὸ θέλημα αὐτοῦ δαρήσεται πολλάς· ὁ δὲ μὴ γνοὺς ποιήσας δὲ ἄξια πληγῶν δαρήσεται ὀλίγας. παντὶ δὲ ᾧ ἐδόθη πολύ, πολὺ ζητηθήσεται παρ' αὐτοῦ, καὶ ᾧ παρέθεντο πολύ, περισσότερον αἰτήσουσιν αὐτόν. Πῦρ ἦλθον βαλεῖν ἐπὶ τὴν γῆν, καὶ τί θέλω εἰ ἤδη ἀνήφθη; βάπτισμα δὲ ἔχω βαπτισθῆναι, καὶ πῶς συνέχομαι ἕως ὅτου τελεσθῇ. δοκεῖτε ὅτι εἰρήνην παρεγενόμην δοῦναι ἐν τῇ γῇ; οὐχί, λέγω ὑμῖν, ἀλλ' ἢ διαμερισμόν.

(e) καὶ εἶπεν αὐτῷ Ναθαναήλ Ἐκ Ναζαρὲτ δύναταί τι ἀγαθὸν εἶναι; λέγει αὐτῷ ὁ Φίλιππος Ἔρχου καὶ ἴδε. εἶδεν Ἰησοῦς τὸν Ναθαναὴλ ἐρχόμενον πρὸς αὐτὸν καὶ λέγει περὶ αὐτοῦ Ἴδε ἀληθῶς Ἰσραηλείτης ἐν ᾧ δόλος οὐκ ἔστιν. λέγει αὐτῷ Ναθαναήλ Πόθεν με γινώσκεις; ἀπεκρίθη Ἰησοῦς καὶ εἶπεν αὐτῷ Πρὸ τοῦ σε Φίλιππον φωνῆσαι ὄντα ὑπὸ τὴν συκῆν εἶδόν σε. ἀπεκρίθη αὐτῷ Ναθαναήλ Ῥαββεί, σὺ εἶ ὁ υἱὸς τοῦ θεοῦ, σὺ βασιλεὺς εἶ τοῦ Ἰσραήλ. ἀπεκρίθη Ἰησοῦς καὶ εἶπεν αὐτῷ Ὅτι εἶπόν σοι ὅτι εἶδόν σε ὑποκάτω τῆς συκῆς πιστεύεις; μείζω τούτων ὄψῃ. καὶ λέγει αὐτῷ Ἀμὴν ἀμὴν λέγω ὑμῖν, ὄψεσθε τὸν οὐρανὸν ἀνεῳγότα καὶ τοὺς ἀγγέλους τοῦ θεοῦ ἀναβαίνοντας καὶ καταβαίνοντας ἐπὶ τὸν υἱὸν τοῦ ἀνθρώπου.

(f) μὴ δοκεῖτε ὅτι ἐγὼ κατηγορήσω ὑμῶν πρὸς τὸν πατέρα· ἔστιν ὁ κατηγορῶν ὑμῶν Μωυσῆς, εἰς ὃν ὑμεῖς ἠλπίκατε. εἰ γὰρ ἐπιστεύετε Μωυσεῖ, ἐπιστεύετε ἂν ἐμοί, περὶ γὰρ ἐμοῦ ἐκεῖνος ἔγραψεν. εἰ δὲ τοῖς ἐκείνου γράμμασιν οὐ πιστεύετε, πῶς τοῖς ἐμοῖς ῥήμασιν πιστεύσετε; Μετὰ ταῦτα ἀπῆλθεν ὁ Ἰησοῦς πέραν τῆς θαλάσσης τῆς Γαλιλαίας τῆς Τιβεριάδος. ἠκολούθει δὲ αὐτῷ ὄχλος πολύς, ὅτι ἐθεώρουν τὰ σημεῖα ἃ ἐποίει ἐπὶ τῶν ἀσθενούντων. ἀνῆλθεν δὲ εἰς τὸ ὄρος Ἰησοῦς, καὶ ἐκεῖ ἐκάθητο μετὰ τῶν μαθητῶν αὐτοῦ. ἦν δὲ ἐγγὺς τὸ πάσχα, ἡ ἑορτὴ τῶν Ἰουδαίων,

(g) ἐν αὐτῷ γὰρ ζῶμεν καὶ κινούμεθα καὶ ἐσμέν, ὡς καί τινες τῶν καθ' ὑμᾶς ποιητῶν εἰρήκασιν Τοῦ γὰρ καὶ γένος ἐσμέν. γένος οὖν ὑπάρχοντες τοῦ θεοῦ οὐκ ὀφείλομεν νομίζειν χρυσῷ ἢ ἀργύρῳ ἢ λίθῳ, χαράγματι τέχνης καὶ ἐνθυμήσεως ἀνθρώπου, τὸ θεῖον εἶναι ὅμοιον. τοὺς μὲν οὖν χρόνους τῆς ἀγνοίας ὑπεριδὼν ὁ θεὸς τὰ νῦν ἀπαγγέλλει τοῖς ἀνθρώποις πάντας πανταχοῦ μετανοεῖν, καθότι ἔστησεν ἡμέραν ἐν ᾗ μέλλει κρίνειν τὴν οἰκουμένην ἐν δικαιοσύνῃ ἐν ἀνδρὶ ᾧ ὥρισεν, πίστιν παρασχὼν πᾶσιν ἀναστήσας αὐτὸν ἐκ νεκρῶν. ἀκούσαντες δὲ ἀνάστασιν νεκρῶν οἱ μὲν ἐχλεύαζον οἱ δὲ εἶπαν Ἀκουσόμεθά σου περὶ τούτου καὶ πάλιν.

(*h*) ἐγένετο δὲ μετὰ ἡμέρας τρεῖς συνκαλέσασθαι αὐτὸν τοὺς ὄντας τῶν Ἰουδαίων πρώτους· συνελθόντων δὲ αὐτῶν ἔλεγεν πρὸς αὐτούς Ἐγώ, ἄνδρες ἀδελφοί, οὐδὲν ἐναντίον ποιήσας τῷ λαῷ ἢ τοῖς ἔθεσι τοῖς πατρῴοις δέσμιος ἐξ Ἱεροσολύμων παρεδόθην εἰς τὰς χεῖρας τῶν Ῥωμαίων, οἵτινες ἀνακρίναντές με ἐβούλοντο ἀπολῦσαι διὰ τὸ μηδεμίαν αἰτίαν θανάτου ὑπάρχειν ἐν ἐμοί· ἀντιλεγόντων δὲ τῶν Ἰουδαίων ἠναγκάσθην ἐπικαλέσασθαι Καίσαρα, οὐχ ὡς τοῦ ἔθνους μου ἔχων τι κατηγορεῖν. διὰ ταύτην οὖν τὴν αἰτίαν παρεκάλεσα ὑμᾶς ἰδεῖν καὶ προσλαλῆσαι, εἵνεκεν γὰρ τῆς ἐλπίδος τοῦ Ἰσραὴλ τὴν ἅλυσιν ταύτην περίκειμαι. οἱ δὲ πρὸς αὐτὸν εἶπαν Ἡμεῖς οὔτε γράμματα περὶ σοῦ ἐδεξάμεθα ἀπὸ τῆς Ἰουδαίας, οὔτε παραγενόμενός τις τῶν ἀδελφῶν ἀπήγγειλεν ἢ ἐλάλησέν τι περὶ σοῦ πονηρόν. ἀξιοῦμεν δὲ παρὰ σοῦ ἀκοῦσαι ἃ φρονεῖς, περὶ μὲν γὰρ τῆς αἱρέσεως ταύτης γνωστὸν ἡμῖν ἐστὶν ὅτι πανταχοῦ ἀντιλέγεται.

7. Illustrate from the original of the Gospels and Acts of the Apostles the use and significance of the titles "Son of God," "Son of Man," "the Holy One of God," "the Messiah," "the Prophet."

8. Illustrate the use of

διαφθορά, ἀκμήν, καμμύειν, βασανίζειν, ἐπιστάτης, ὄνομα, ὁ ἅγιος τόπος, ὑποστέλλεσθαι, εἶμι, ἐμβριμᾶσθαι, ἀρξάμενον, ὁ δεῖνα, μερίς, στρῶσον, ἄνωθεν, καὶ γάρ, σκεῦος, ἀντιλαμβάνεσθαι, ἐγκάθετος.

9. Comment on

(*a*) καὶ πάλιν ἑτέρα γραφὴ λέγει Ὄψονται εἰς ὃν ἐξεκέντησαν.

(*b*) ἦσαν δὲ προσκαρτεροῦντες τῇ διδαχῇ τῶν ἀποστόλων καὶ τῇ κοινωνίᾳ, τῇ κλάσει τοῦ ἄρτου καὶ ταῖς προσευχαῖς.

(*c*) ὁ πιστεύσας καὶ βαπτισθεὶς σωθήσεται, ὁ δὲ ἀπιστήσας κατακριθήσεται. σημεῖα δὲ τοῖς πιστεύσασιν ἀκολουθήσει ταῦτα, ἐν τῷ ὀνόματί μου δαιμόνια ἐκβαλοῦσιν, γλώσσαις λαλήσουσιν, καὶ ἐν ταῖς χερσὶν ὄφεις ἀροῦσιν κἂν θανάσιμόν τι πίωσιν οὐ μὴ αὐτοὺς βλάψῃ, ἐπὶ ἀρρώστους χεῖρας ἐπιθήσουσιν καὶ καλῶς ἕξουσιν.

(*d*) καὶ ἐπῄνεσεν ὁ κύριος τὸν οἰκονόμον τῆς ἀδικίας ὅτι φρονίμως ἐποίησεν· ὅτι οἱ υἱοὶ τοῦ αἰῶνος τούτου φρονιμώτεροι ὑπὲρ τοὺς υἱοὺς τοῦ φωτὸς εἰς τὴν γενεὰν τὴν ἑαυτῶν εἰσίν. Καὶ ἐγὼ ὑμῖν λέγω, ἑαυτοῖς ποιήσατε φίλους ἐκ τοῦ μαμωνᾶ τῆς ἀδικίας, ἵνα ὅταν ἐκλίπῃ δέξωνται ὑμᾶς εἰς τὰς αἰωνίους σκηνάς.

(*e*) ἀμὴν λέγω ὑμῖν, ὅπου ἐὰν κηρυχθῇ τὸ εὐαγγέλιον τοῦτο ἐν ὅλῳ τῷ κόσμῳ, λαληθήσεται καὶ ὃ ἐποίησεν αὕτη εἰς μνημόσυνον αὐτῆς.

(*f*) καὶ νῦν ἰδοὺ ἐγὼ οἶδα ὅτι οὐκέτι ὄψεσθε τὸ πρόσωπόν μου ὑμεῖς πάντες ἐν οἷς διῆλθον κηρύσσων τὴν βασιλείαν.

10. Write a critical note on

(*a*) τίς ἐκ τῶν δύο ἐποίησε τὸ θέλημα τοῦ πατρός; λέγουσιν αὐτῷ, Ὁ πρῶτος. λέγει αὐτοῖς ὁ Ἰησοῦς, Ἀμὴν λέγω ὑμῖν, ὅτι οἱ τελῶναι καὶ αἱ πόρναι προάγουσιν ὑμᾶς εἰς τὴν βασιλείαν τοῦ Θεοῦ.

(*b*) ἀποκριθεὶς δὲ εἶπεν αὐτῇ ὁ Ἰησοῦς, Μάρθα Μάρθα, μεριμνᾷς καὶ τυρβάζῃ περὶ πολλά· ἑνὸς δέ ἐστι χρεία.

(*c*) ὡς δὲ κατῆλθον ἀπὸ τῆς Μακεδονίας ὅ τε Σίλας καὶ ὁ Τιμόθεος, συνείχετο τῷ πνεύματι ὁ Παῦλος, διαμαρτυρόμενος τοῖς Ἰουδαίοις τὸν Χριστὸν Ἰησοῦν.

(*d*) ὁ δὲ Ἀγρίππας πρὸς τὸν Παῦλον ἔφη, Ἐν ὀλίγῳ με πείθεις Χριστιανὸν γενέσθαι.

11. Translate and explain

In multis exemplaribus non continetur, quod Barabbas etiam Jesus dicebatur, et forsitan recte, ut ne nomen Jesu conveniat alicui impiorum.

Estimate the value of Patristic testimony in Textual Criticism.

12. Translate and explain

καὶ ἐμοσχοποίησαν ἐν ταῖς ἡμέραις ἐκείναις καὶ ἀνήγαγον θυσίαν τῷ εἰδώλῳ, καὶ εὐφραίνοντο ἐν τοῖς ἔργοις τῶν χειρῶν αὐτῶν. ἔστρεψεν δὲ ὁ θεὸς καὶ παρέδωκεν αὐτοὺς λατρεύειν τῇ στρατιᾷ τοῦ οὐρανοῦ, καθὼς γέγραπται ἐν Βίβλῳ τῶν προφητῶν Μὴ σφάγια καὶ θυσίας προσηνέγκατέ μοι ἔτη τεσσεράκοντα ἐν τῇ ἐρήμῳ, οἶκος Ἰσραήλ; καὶ ἀνελάβετε τὴν σκηνὴν τοῦ Μολὸχ καὶ τὸ ἄστρον τοῦ θεοῦ Ῥομφά, τοὺς τύπους οὓς ἐποιήσατε προσκυνεῖν αὐτοῖς. καὶ μετοικιῶ ὑμᾶς ἐπέκεινα Βαβυλῶνος. Ἡ σκηνὴ τοῦ μαρτυρίου ἦν τοῖς πατράσιν ἡμῶν ἐν τῇ ἐρήμῳ, καθὼς διετάξατο ὁ λαλῶν τῷ Μωυσῇ ποιῆσαι αὐτὴν κατὰ τὸν τύπον ὃν ἑωράκει.

Show from the New Testament the purpose and methods of quotation from the Old Testament in our Lord's time.

13. Λουκᾶς ὁ ἰατρὸς ὁ ἀγαπητός. Where do these words occur? Show how far it can be gathered from St Luke's writings to what profession he belonged.

14. Explain what has been called "Primitive Error." Mention any cases in which a "conjectural emendation" has commended itself to you, and for what reasons.

15. Retranslate:

(*a*) But Jesus said, Forbid him not: for there is no man which shall do a miracle in my name, that can lightly speak evil of me. For he that is not against us is on our part. For whosoever shall give you a cup of water to drink in my name, because ye belong to Christ, verily I say unto you, he shall not lose his reward.

(*b*) And when he is come, he will reprove the world of sin, and of righteousness, and of judgment: Of sin, because they believe not on me; Of righteousness, because I go to my Father, and ye see me no more; Of judgment, because the prince of this world is judged.

(*c*) Repent ye therefore, and be converted, that your sins may be blotted out, when the times of refreshing shall come from the presence of the Lord; And he shall send Jesus Christ, which before was preached unto you: Whom the heaven must receive until the times of restitution of all things, which God hath spoken by the mouth of all his holy prophets since the world began.

THURSDAY, *November* 15, 1883. 1—4.

BACHELORS.

1. DUÆ Epistolæ, quæ feruntur Petri, stylo inter se discrepant structuraque verborum; ex quo intelligimus pro necessitate rerum diversis eum usum Interpretibus.

JEROME, *Epist.* 120.

Discuss the theory here propounded. State fully the evidence relating to the Canonicity of the Second Epistle of S. Peter. Examine the statement that the diction of this Epistle has been borrowed in part from Josephus.

2. Discuss the following statement of Augustine with regard to Latin Versions of the New Testament

Ut enim cuique primis fidei temporibus in manus venit codex Græcus...ausus est interpretari.

AUG. *de Doctr. Christ.* II. 16.

3. Explain the technical terms in the following passage:

Ἀντώνινος ὁμολογητὴς ἀντέβαλεν Παμφίλος διόρθωσα τὸ τεῦχος.

Discuss the use in Textual Criticism of the terms 'Intrinsic Probability'—'Transcriptional Probability'—'Genealogical Evidence'—'Grouping of Documents'—'Neutral Text.'

4. Præferatur aliis lectio cui subest sensus apparenter falsus qui vero re penitus examinata verus esse deprehenditur.

Estimate the value in Textual Criticism of this and similar Canons. Give instances from the Epistles or Apocalypse in which such Canons appear to you to have been rightly or wrongly applied.

5. Point out the peculiar difficulties met with in the attempt to determine the text of the Apocalypse. What Patristic evidence is particularly valuable with regard to the Old Latin Version of this Book?

6. Point out apparent references in the Epistles

(*a*) to the Lord's Prayer—

(*b*) to other sayings of our Lord—

(*c*) to the early Chapters of Genesis—

(*d*) to Apocryphal Books or Jewish traditions.

7. Compare and contrast the First Epistle of S. John with the Fourth Gospel, in relation to (1) its style and diction, (2) its presentation of spiritual truths.

8. Translate with notes critical and explanatory:

(a) ἀλλὰ τί λέγει αὐτῷ ὁ χρηματισμός; Κατέλιπον ἐμαυτῷ ἑπτακισχιλίους ἄνδρας, οἵτινες οὐκ ἔκαμψαν γόνυ τῇ Βάαλ. οὕτως οὖν καὶ ἐν τῷ νῦν καιρῷ λεῖμμα κατ' ἐκλογὴν χάριτος γέγονεν. εἰ δὲ χάριτι, οὐκ ἔτι ἐξ ἔργων· ἐπεὶ ἡ χάρις οὐκ ἔτι γίνεται χάρις. εἰ δὲ ἐξ ἔργων, οὐκ ἔτι ἐστὶ χάρις· ἐπεὶ τὸ ἔργον οὐκ ἔτι ἐστὶν ἔργον. τί οὖν; ὃ ἐπιζητεῖ Ἰσραήλ, τούτου οὐκ ἐπέτυχεν, ἡ δὲ ἐκλογὴ ἐπέτυχεν, οἱ δὲ λοιποὶ ἐπωρώθησαν, καθὼς γέγραπται, Ἔδωκεν αὐτοῖς ὁ Θεὸς πνεῦμα κατανύξεως, ὀφθαλμοὺς τοῦ μὴ βλέπειν, καὶ ὦτα τοῦ μὴ ἀκούειν, ἕως τῆς σήμερον ἡμέρας.

(b) καὶ ἐὰν ψωμίσω πάντα τὰ ὑπάρχοντά μου, καὶ ἐὰν παραδῶ τὸ σῶμά μου ἵνα καυθήσωμαι, ἀγάπην δὲ μὴ ἔχω, οὐδὲν ὠφελοῦμαι. ἡ ἀγάπη μακροθυμεῖ, χρηστεύεται· ἡ ἀγάπη οὐ ζηλοῖ· ἡ ἀγάπη οὐ περπερεύεται, οὐ φυσιοῦται, οὐκ ἀσχημονεῖ, οὐ ζητεῖ τὰ ἑαυτῆς, οὐ παροξύνεται, οὐ λογίζεται τὸ κακόν, οὐ χαίρει ἐπὶ τῇ ἀδικίᾳ, συγχαίρει δὲ τῇ ἀληθείᾳ, πάντα στέγει, πάντα πιστεύει, πάντα ἐλπίζει, πάντα ὑπομένει.

(c) μηδεὶς ὑμᾶς καταβραβευέτω θέλων ἐν ταπεινοφροσύνῃ καὶ θρησκείᾳ τῶν ἀγγέλων, ἃ μὴ ἑώρακεν ἐμβατεύων, εἰκῇ φυσιούμενος ὑπὸ τοῦ νοὸς τῆς σαρκὸς αὐτοῦ, καὶ οὐ κρατῶν τὴν κεφαλήν, ἐξ οὗ πᾶν τὸ σῶμα διὰ τῶν ἁφῶν καὶ συνδέσμων ἐπιχορηγούμενον καὶ συμβιβαζόμενον αὔξει τὴν αὔξησιν τοῦ Θεοῦ.

(d) ὃ καὶ ἡμᾶς ἀντίτυπον νῦν σώζει βάπτισμα, οὐ σαρκὸς ἀπόθεσις ῥύπου, ἀλλὰ συνειδήσεως ἀγαθῆς ἐπερώτημα εἰς Θεόν, δι' ἀναστάσεως Ἰησοῦ Χριστοῦ, ὅς ἐστιν ἐν δεξιᾷ τοῦ Θεοῦ, πορευθεὶς εἰς οὐρανὸν ὑποταγέντων αὐτῷ ἀγγέλων καὶ ἐξουσιῶν καὶ δυνάμεων.

(e) καὶ τῷ ἀγγέλῳ τῆς ἐκκλησίας Λαοδικέων γράψον, Τάδε λέγει ὁ Ἀμὴν, ὁ μάρτυς ὁ πιστὸς καὶ ἀληθινὸς, ἡ ἀρχὴ τῆς κτίσεως τοῦ Θεοῦ· Οἶδά σου τὰ ἔργα, ὅτι οὔτε ψυχρὸς εἶ οὔτε ζεστός· ὄφελον ψυχρὸς εἶης ἢ ζεστός.

9. Without translating discuss any difficulties in the following passages.

(a) καὶ γάρ ἐσμεν εὐηγγελισμένοι καθάπερ κἀκεῖνοι, ἀλλ' οὐκ ὠφέλησεν ὁ λόγος τῆς ἀκοῆς ἐκείνους, μὴ συνκεκερασμένους τῇ πίστει τοῖς ἀκούσασιν.

(b) σωθήσεται δὲ διὰ τῆς τεκνογονίας, ἐὰν μείνωσιν ἐν πίστει καὶ ἀγάπῃ καὶ ἁγιασμῷ μετὰ σωφροσύνης.

(c) ἥξει δὲ ἡμέρα Κυρίου ὡς κλέπτης, ἐν ᾗ οἱ οὐρανοὶ ῥοιζηδὸν παρελεύσονται, στοιχεῖα δὲ καυσούμενα λυθήσεται, καὶ γῆ καὶ τὰ ἐν αὐτῇ ἔργα εὑρεθήσεται.

(d) ἔστιν ἁμαρτία πρὸς θάνατον· οὐ περὶ ἐκείνης λέγω ἵνα ἐρωτήσῃ. πᾶσα ἀδικία ἁμαρτία ἐστίν, καὶ ἔστιν ἁμαρτία οὐ πρὸς θάνατον.

(e) εἴ τις εἰς αἰχμαλωσίαν, εἰς αἰχμαλωσίαν ὑπάγει· εἴ τις ἐν μαχαίρῃ ἀποκτενεῖ, δεῖ αὐτὸν ἐν μαχαίρῃ ἀποκτανθῆναι. Ὧδέ ἐστιν ἡ ὑπομονὴ καὶ ἡ πίστις τῶν ἁγίων.

10. Explain the following words and expressions, illustrating their usage in the Epistles or Apocalypse,

ἐριθεία — πληροφορεῖσθαι — ὁ χοϊκός — συστατικαὶ ἐπιστολαί — ἑτεροζυγεῖν — κανών — μονογενής — ἀρραβών — στρηνιᾶν — ὁ Παντοκράτωρ.

11. Distinguish between the following synonymous words:

θρησκεία, λατρεία, λειτουργία—ἀπολύτρωσις, καταλλαγή, ἱλασμός—ἀποκάλυψις, ἐπιφάνεια, φανέρωσις—δημιουργός, τεχνίτης—στέφανος, διάδημα.

12. Retranslate, criticising the renderings and stating the main authorities for important variations in the Greek text,

(*a*) Our conversation is in heaven, from whence also we look for the Saviour, the Lord Jesus Christ; who shall change our vile body that it may be fashioned like unto His glorious body.

(*b*) We were gentle among you, even as a nurse cherisheth her own children.

(*c*) We have also a more sure word of prophecy; whereunto ye do well that ye take heed, as unto a light that shineth in a dark place, until the day dawn, and the day star arise in your hearts.

(*d*) Unto Him that loved us and washed us from our sins in His own blood.

(*e*) Miserum me, quis liberaret de corpore mortis hujus nisi gratia tua per Jesum Christum Dominum nostrum?

(*f*) In te non est transmutatio nec momenti obumbratio.

(*g*) Omnis spiritus qui solvit Jesum non est ex Deo.

13. Explain the following notes, stating in each case the approximate date and the locality of the several authorities mentioned,

(*a*) 2 Cor. iii. 3 (†) *πλαξὶν καρδίαις σαρκίναις*] *καρδίας* for *καρδίαις* (probably Western and) Syrian (Gr. Lat. Syr. Eg. Æth. Arm. Goth.); incl. F_2 (doubtless by assimilation to the annexed lat.vg) [Iren.lat.txt] Orig. *Ps.* (from a single catena); *Rom.* lat. Rut[5] [Adamant. txt] Did. *Ps.* i (p. 272 Cord.) Cyr.*loc.* (*s.q.*); *Is.* 504 (*s.q.*). Text ℵABCD$_2$G$_3$L$_2$P$_2$ cu[25] syr.hl Iren.com (? Clem.*Paed.* 307) Eus.*Mart.*

(*b*) *θεου* (Gb′) cum ℵ*ABCD^c^EFGKL al[70] cdd[gr] ap Aug et ap Amb (vide post) g vg[cod] (ap Gb) cdd[lat] ap Aug cop syr[p mg] Eus[pe 449] Ath[522] Euthal[cod] Thdrt ad h. l. et[2,1047 cod] Dam al. Sic autem Aug[trin 1,12(8,756)]: "*Nos enim sumus circumcisio, spiritui dei servientes,* quod est in Graeco *λατρευοντεσ.*" *θεω* cum ℵ^c^D*P al mu d e f m vg go syr[sch] et[p txt] arm aeth Chr[316. 317. 318] (*οι πνευματι θεω λατρευοντεσ, τουτεστιν οι πνευματικωσ λατρευοντεσ*) Thdrt[2,1047 ed] al Or[int 2,68. 230] et[3,787] et[4,487. 489] Victorin Ambrst.

THURSDAY, *November* 15, 1883. 9—12.

UNDERGRADUATES.

1. WHAT are the probable dates at which the several Gospels were written? Give your reasons for assigning the date in each case.

2. What are the Muratorian Fragment and the Peshito Version? Shew their importance in the History of the Canon.

3. Discuss *one* of the following questions:

(*a*) On what grounds is it said that the Gospel of St Luke and the Acts of the Apostles were written by the same hand?

(*b*) From what internal evidence does it appear probable that the author of the Fourth Gospel was a Jew of Palestine?

4. What traces do we find of the embodiment of written or oral tradition in the Historical books of the New Testament?

5. *Either* Write a careful analysis of one of the Gospels shewing its plan and purpose, *or*

Estimate the importance of prophecy and miracle in the Gospel narrative.

6. Translate with short notes *five* of the following:

(*a*) καὶ ἐλθὼν εἰς τὴν πατρίδα αὐτοῦ ἐδίδασκεν αὐτοὺς ἐν τῇ συναγωγῇ αὐτῶν, ὥστε ἐκπλήσσεσθαι αὐτοὺς καὶ λέγειν Πόθεν τούτῳ ἡ σοφία αὕτη καὶ αἱ δυνάμεις; οὐχ οὗτός ἐστιν ὁ τοῦ τέκτονος υἱός; οὐχ ἡ μήτηρ αὐτοῦ λέγεται Μαριὰμ καὶ οἱ ἀδελφοὶ αὐτοῦ Ἰάκωβος καὶ Ἰωσὴφ καὶ Σίμων καὶ Ἰούδας; καὶ αἱ ἀδελφαὶ αὐτοῦ οὐχὶ πᾶσαι πρὸς ἡμᾶς εἰσίν; πόθεν οὖν τούτῳ ταῦτα πάντα; καὶ ἐσκανδαλίζοντο ἐν αὐτῷ. ὁ δὲ Ἰησοῦς εἶπεν αὐτοῖς Οὐκ ἔστιν προφήτης ἄτιμος εἰ μὴ ἐν τῇ πατρίδι καὶ ἐν τῇ οἰκίᾳ αὐτοῦ. Καὶ οὐκ ἐποίησεν ἐκεῖ δυνάμεις πολλὰς διὰ τὴν ἀπιστίαν αὐτῶν.

(*b*) καὶ εὐθὺς ἦν ἐν τῇ συναγωγῇ αὐτῶν ἄνθρωπος ἐν πνεύματι ἀκαθάρτῳ, καὶ ἀνέκραξεν λέγων Τί ἡμῖν καὶ σοί, Ἰησοῦ Ναζαρηνέ; ἦλθες ἀπολέσαι ἡμᾶς; οἶδά σε τίς εἶ, ὁ ἅγιος τοῦ θεοῦ. καὶ ἐπετίμησεν αὐτῷ ὁ Ἰησοῦς λέγων Φιμώθητι καὶ ἔξελθε ἐξ αὐτοῦ. καὶ σπαράξαν αὐτὸν τὸ πνεῦμα τὸ ἀκάθαρτον καὶ φωνήσαν φωνῇ μεγάλῃ ἐξῆλθεν ἐξ αὐτοῦ. καὶ ἐθαμβήθησαν ἅπαντες, ὥστε συνζητεῖν αὐτοὺς λέγοντας Τί ἐστιν τοῦτο; διδαχὴ καινή· κατ' ἐξουσίαν καὶ τοῖς πνεύμασι τοῖς ἀκαθάρτοις ἐπιτάσσει, καὶ ὑπακούουσιν αὐτῷ. Καὶ ἐξῆλθεν ἡ ἀκοὴ αὐτοῦ εὐθὺς πανταχοῦ εἰς ὅλην τὴν περίχωρον τῆς Γαλιλαίας.

(*c*) καὶ σὺ δέ, παιδίον, προφήτης Ὑψίστου κληθήσῃ, προπορεύσῃ γὰρ ἐνώπιον Κυρίου ἑτοιμάσαι ὁδοὺς αὐτοῦ, τοῦ δοῦναι γνῶσιν σωτηρίας τῷ λαῷ αὐτοῦ ἐν ἀφέσει ἁμαρτιῶν αὐτῶν, διὰ σπλάγχνα ἐλέους θεοῦ ἡμῶν, ἐν οἷς ἐπισκέψεται ἡμᾶς ἀνατολὴ ἐξ ὕψους, ἐπιφᾶναι τοῖς ἐν σκότει καὶ σκιᾷ θανάτου καθημένοις, τοῦ κατευθῦναι τοὺς πόδας ἡμῶν εἰς ὁδὸν εἰρήνης. Τὸ δὲ παιδίον ηὔξανε καὶ ἐκραταιοῦτο πνεύματι, καὶ ἦν ἐν ταῖς ἐρήμοις ἕως ἡμέρας ἀναδείξεως αὐτοῦ πρὸς τὸν Ἰσραήλ.

(*d*) ἐκεῖνος δὲ ὁ δοῦλος ὁ γνοὺς τὸ θέλημα τοῦ κυρίου αὐτοῦ καὶ μὴ ἑτοιμάσας ἢ ποιήσας πρὸς τὸ θέλημα αὐτοῦ δαρήσεται πολλάς· ὁ δὲ μὴ γνοὺς ποιήσας δὲ ἄξια πληγῶν δαρήσεται ὀλίγας. παντὶ δὲ ᾧ ἐδόθη πολύ, πολὺ ζητηθήσεται παρ' αὐτοῦ, καὶ ᾧ παρέθεντο πολύ, περισσότερον αἰτήσουσιν αὐτόν. Πῦρ ἦλθον βαλεῖν ἐπὶ τὴν γῆν, καὶ τί θέλω εἰ ἤδη ἀνήφθη; βάπτισμα δὲ ἔχω βαπτισθῆναι, καὶ πῶς συνέχομαι ἕως ὅτου τελεσθῇ. δοκεῖτε ὅτι εἰρήνην παρεγενόμην δοῦναι ἐν τῇ γῇ; οὐχί, λέγω ὑμῖν, ἀλλ' ἢ διαμερισμόν.

(*e*) καὶ εἶπεν αὐτῷ Ναθαναὴλ Ἐκ Ναζαρὲτ δύναταί τι ἀγαθὸν εἶναι; λέγει αὐτῷ ὁ Φίλιππος Ἔρχου καὶ ἴδε. εἶδεν Ἰησοῦς τὸν Ναθαναὴλ ἐρχόμενον πρὸς αὐτὸν καὶ λέγει περὶ αὐτοῦ Ἴδε ἀληθῶς Ἰσραηλείτης ἐν ᾧ δόλος οὐκ ἔστιν. λέγει αὐτῷ Ναθαναὴλ Πόθεν με γινώσκεις; ἀπεκρίθη Ἰησοῦς καὶ εἶπεν αὐτῷ Πρὸ τοῦ σε Φίλιππον φωνῆσαι ὄντα ὑπὸ τὴν συκῆν εἶδόν σε. ἀπεκρίθη αὐτῷ Ναθαναὴλ Ῥαββεί, σὺ εἶ ὁ υἱὸς τοῦ θεοῦ, σὺ βασιλεὺς εἶ τοῦ Ἰσραήλ. ἀπεκρίθη Ἰησοῦς καὶ εἶπεν αὐτῷ Ὅτι εἶπόν σοι ὅτι εἶδόν σε ὑποκάτω τῆς συκῆς πιστεύεις; μείζω τούτων ὄψῃ. καὶ λέγει αὐτῷ Ἀμὴν ἀμὴν λέγω ὑμῖν, ὄψεσθε τὸν οὐρανὸν ἀνεῳγότα καὶ τοὺς ἀγγέλους τοῦ θεοῦ ἀναβαίνοντας καὶ καταβαίνοντας ἐπὶ τὸν υἱὸν τοῦ ἀνθρώπου.

(*f*) μὴ δοκεῖτε ὅτι ἐγὼ κατηγορήσω ὑμῶν πρὸς τὸν πατέρα· ἔστιν ὁ κατηγορῶν ὑμῶν Μωυσῆς, εἰς ὃν ὑμεῖς ἠλπίκατε. εἰ γὰρ ἐπιστεύετε Μωυσεῖ, ἐπιστεύετε ἂν ἐμοί, περὶ γὰρ ἐμοῦ ἐκεῖνος ἔγραψεν. εἰ δὲ τοῖς ἐκείνου γράμμασιν οὐ πιστεύετε, πῶς τοῖς ἐμοῖς ῥήμασιν πιστεύσετε; Μετὰ ταῦτα ἀπῆλθεν ὁ Ἰησοῦς πέραν τῆς θαλάσσης τῆς Γαλιλαίας τῆς Τιβεριάδος. ἠκολούθει δὲ αὐτῷ ὄχλος πολύς, ὅτι ἐθεώρουν τὰ σημεῖα ἃ ἐποίει ἐπὶ τῶν ἀσθενούντων. ἀνῆλθεν δὲ εἰς τὸ ὄρος Ἰησοῦς, καὶ ἐκεῖ ἐκάθητο μετὰ τῶν μαθητῶν αὐτοῦ. ἦν δὲ ἐγγὺς τὸ πάσχα, ἡ ἑορτὴ τῶν Ἰουδαίων.

(*g*) ἐν αὐτῷ γὰρ ζῶμεν καὶ κινούμεθα καὶ ἐσμέν, ὡς καί τινες τῶν καθ' ὑμᾶς ποιητῶν εἰρήκασιν Τοῦ γὰρ καὶ γένος ἐσμέν. γένος οὖν ὑπάρχοντες τοῦ θεοῦ οὐκ ὀφείλομεν νομίζειν χρυσῷ ἢ ἀργύρῳ ἢ λίθῳ, χαράγματι τέχνης καὶ ἐνθυμήσεως ἀνθρώπου, τὸ θεῖον εἶναι ὅμοιον. τοὺς μὲν οὖν χρόνους τῆς ἀγνοίας ὑπεριδὼν ὁ θεὸς τὰ νῦν ἀπαγγέλλει τοῖς ἀνθρώποις πάντας πανταχοῦ μετανοεῖν, καθότι ἔστησεν ἡμέραν ἐν ᾗ μέλλει κρίνειν τὴν οἰκουμένην ἐν δικαιοσύνῃ ἐν ἀνδρὶ ᾧ ὥρισεν, πίστιν παρασχὼν πᾶσιν ἀναστήσας αὐτὸν ἐκ νεκρῶν. ἀκούσαντες δὲ ἀνάστασιν νεκρῶν οἱ μὲν ἐχλεύαζον οἱ δὲ εἶπαν Ἀκουσόμεθά σου περὶ τούτου καὶ πάλιν.

(*h*) ἐγένετο δὲ μετὰ ἡμέρας τρεῖς συνκαλέσασθαι αὐτὸν τοὺς ὄντας τῶν Ἰουδαίων πρώτους· συνελθόντων δὲ αὐτῶν ἔλεγεν πρὸς αὐτούς Ἐγώ, ἄνδρες ἀδελφοί, οὐδὲν ἐναντίον ποιήσας τῷ λαῷ ἢ τοῖς ἔθεσι τοῖς πατρῴοις δέσμιος

ἐξ Ἱεροσολύμων παρεδόθην εἰς τὰς χεῖρας τῶν Ῥωμαίων, οἵτινες ἀνακρίναντές με ἐβούλοντο ἀπολῦσαι διὰ τὸ μηδεμίαν αἰτίαν θανάτου ὑπάρχειν ἐν ἐμοί· ἀντιλεγόντων δὲ τῶν Ἰουδαίων ἠναγκάσθην ἐπικαλέσασθαι Καίσαρα, οὐχ ὡς τοῦ ἔθνους μου ἔχων τι κατηγορεῖν· διὰ ταύτην οὖν τὴν αἰτίαν παρεκάλεσα ὑμᾶς ἰδεῖν καὶ προσλαλῆσαι, εἵνεκεν γὰρ τῆς ἐλπίδος τοῦ Ἰσραὴλ τὴν ἅλυσιν ταύτην περίκειμαι. οἱ δὲ πρὸς αὐτὸν εἶπαν Ἡμεῖς οὔτε γράμματα περὶ σοῦ ἐδεξάμεθα ἀπὸ τῆς Ἰουδαίας, οὔτε παραγενόμενός τις τῶν ἀδελφῶν ἀπήγγειλεν ἢ ἐλάλησέν τι περὶ σοῦ πονηρόν. ἀξιοῦμεν δὲ παρὰ σοῦ ἀκοῦσαι ἃ φρονεῖς, περὶ μὲν γὰρ τῆς αἱρέσεως ταύτης γνωστὸν ἡμῖν ἐστὶν ὅτι πανταχοῦ ἀντιλέγεται.

7. Illustrate from the original of the Gospels and Acts of the Apostles the use and significance of the titles "Son of God," "Son of Man," "the Holy One of God," "the Messiah," "the Prophet."

8. Illustrate the use of

διαφθορά, ἀκμήν, καμμύειν, βασανίζειν, ἐπιστάτης, ὄνομα, ὁ ἅγιος τόπος, ὑποστέλλεσθαι, εἶμι, ἐμβριμᾶσθαι, ἀρξάμενον, ὁ δεῖνα, μερίς, στρῶσον, ἄνωθεν, καὶ γάρ.

9. Comment on

(a) καὶ πάλιν ἑτέρα γραφὴ λέγει Ὄψονται εἰς ὃν ἐξεκέντησαν.

(b) ἦσαν δὲ προσκαρτεροῦντες τῇ διδαχῇ τῶν ἀποστόλων καὶ τῇ κοινωνίᾳ, τῇ κλάσει τοῦ ἄρτου καὶ ταῖς προσευχαῖς.

(c) ὁ πιστεύσας καὶ βαπτισθεὶς σωθήσεται, ὁ δὲ ἀπιστήσας κατακριθήσεται. σημεῖα δὲ τοῖς πιστεύσασιν ἀκολουθήσει ταῦτα, ἐν τῷ ὀνόματί μου δαιμόνια ἐκβαλοῦσιν, γλώσσαις λαλήσουσιν, καὶ ἐν ταῖς χερσὶν ὄφεις ἀροῦσιν κἂν θανάσιμόν τι πίωσιν οὐ μὴ αὐτοὺς βλάψῃ, ἐπὶ ἀρρώστους χεῖρας ἐπιθήσουσιν καὶ καλῶς ἕξουσιν.

(d) καὶ ἐπῄνεσεν ὁ κύριος τὸν οἰκονόμον τῆς ἀδικίας ὅτι φρονίμως ἐποίησεν· ὅτι οἱ υἱοὶ τοῦ αἰῶνος τούτου φρονιμώτεροι ὑπὲρ τοὺς υἱοὺς τοῦ φωτὸς εἰς τὴν γενεὰν τὴν ἑαυτῶν εἰσίν. Καὶ ἐγὼ ὑμῖν λέγω, ἑαυτοῖς ποιήσατε φίλους ἐκ τοῦ μαμωνᾶ τῆς ἀδικίας, ἵνα ὅταν ἐκλίπῃ δέξωνται ὑμᾶς εἰς τὰς αἰωνίους σκηνάς.

(e) ἀμὴν λέγω ὑμῖν, ὅπου ἐὰν κηρυχθῇ τὸ εὐαγγέλιον τοῦτο ἐν ὅλῳ τῷ κόσμῳ, λαληθήσεται καὶ ὃ ἐποίησεν αὕτη εἰς μνημόσυνον αὐτῆς.

10. Write a critical note on

(a) τίς ἐκ τῶν δύο ἐποίησε τὸ θέλημα τοῦ πατρός; λέγουσιν αὐτῷ, Ὁ πρῶτος. λέγει αὐτοῖς ὁ Ἰησοῦς, Ἀμὴν λέγω ὑμῖν, ὅτι οἱ τελῶναι καὶ αἱ πόρναι προάγουσιν ὑμᾶς εἰς τὴν βασιλείαν τοῦ Θεοῦ.

(b) ἀποκριθεὶς δὲ εἶπεν αὐτῇ ὁ Ἰησοῦς, Μάρθα Μάρθα, μεριμνᾷς καὶ τυρβάζῃ περὶ πολλά· ἑνὸς δέ ἐστι χρεία.

(c) ὡς δὲ κατῆλθον ἀπὸ τῆς Μακεδονίας ὅ τε Σίλας καὶ ὁ Τιμόθεος, συνείχετο τῷ πνεύματι ὁ Παῦλος, διαμαρτυρόμενος τοῖς Ἰουδαίοις τὸν Χριστὸν Ἰησοῦν.

(*d*) *προσέχετε οὖν ἑαυτοῖς καὶ παντὶ τῷ ποιμνίῳ, ἐν ᾧ ὑμᾶς τὸ Πνεῦμα τὸ ἅγιον ἔθετο ἐπισκόπους, ποιμαίνειν τὴν ἐκκλησίαν τοῦ Θεοῦ, ἣν περιεποιήσατο διὰ τοῦ ἰδίου αἵματος.*

11. Translate and explain:

καὶ ἐμοσχοποίησαν ἐν ταῖς ἡμέραις ἐκείναις καὶ ἀνήγαγον θυσίαν τῷ εἰδώλῳ, καὶ εὐφραίνοντο ἐν τοῖς ἔργοις τῶν χειρῶν αὐτῶν. ἔστρεψεν δὲ ὁ θεὸς καὶ παρέδωκεν αὐτοὺς λατρεύειν τῇ στρατιᾷ τοῦ οὐρανοῦ, καθὼς γέγραπται ἐν Βίβλῳ τῶν προφητῶν Μὴ σφάγια καὶ θυσίας προσηνέγκατέ μοι ἔτη τεσσεράκοντα ἐν τῇ ἐρήμῳ, οἶκος Ἰσραήλ; καὶ ἀνελάβετε τὴν σκηνὴν τοῦ Μολὸχ καὶ τὸ ἄστρον τοῦ θεοῦ Ῥομφά, τοὺς τύπους οὓς ἐποιήσατε προσκυνεῖν αὐτοῖς. καὶ μετοικιῶ ὑμᾶς ἐπέκεινα Βαβυλῶνος. Ἡ σκηνὴ τοῦ μαρτυρίου ἦν τοῖς πατράσιν ἡμῶν ἐν τῇ ἐρήμῳ, καθὼς διετάξατο ὁ λαλῶν τῷ Μωυσῇ ποιῆσαι αὐτὴν κατὰ τὸν τύπον ὃν ἑωράκει.

Shew from the New Testament the purpose and methods of quotation from the Old Testament in our Lord's time.

12. *Λουκᾶς ὁ ἰατρὸς ὁ ἀγαπητός.* Where do these words occur? Shew how far it can be gathered from St Luke's writings to what profession he belonged.

13. Retranslate:

(*a*) But Jesus said, Forbid him not; for there is no man which shall do a miracle in my name, that can lightly speak evil of me. For he that is not against us is on our part. For whosoever shall give you a cup of water to drink in my name, because ye belong to Christ, verily I say unto you, he shall not lose his reward.

(*b*) And when he is come, he will reprove the world of sin, and of righteousness, and of judgment: Of sin, because they believe not on me; Of righteousness, because I go to my Father, and ye see me no more; Of judgment, because the prince of this world is judged.

(*c*) Repent ye therefore, and be converted, that your sins may be blotted out, when the times of refreshing shall come from the presence of the Lord; And he shall send Jesus Christ, which before was preached unto you: Whom the heaven must receive until the times of restitution of all things, which God hath spoken by the mouth of all his holy prophets since the world began.

THURSDAY, *November* 15, 1883. 1—4.

UNDERGRADUATES.

1. DISTRIBUTE the Books of the New Testament with reference to their Canonicity into Classes according to the arrangement of Eusebius. Point out any ambiguities in his statements with regard to certain Books. State fully the evidence for the Canonicity of the Epistle to the Hebrews.

2. Discuss the following statement of Augustine with regard to Latin Versions of the New Testament

Ut enim cuique primis fidei temporibus in manus venit codex Graecus...ausus est interpretari.

AUG. *de Doctr. Christ.* II. 16.

3. Explain the technical terms in the following passage:

Ἀντώνινος ὁμολογητὴς ἀντέβαλεν Πάμφιλος διόρθωσα τὸ τεῦχος.

Discuss the use in Textual Criticism of the terms 'Intrinsic Probability'—'Transcriptional Probability'—'Genealogical Evidence'—'Grouping of Documents'—'Neutral Text.'

4. Præferatur aliis lectio cui subest sensus apparenter falsus qui vero re penitus examinata verus esse deprehenditur.

Estimate the value in Textual Criticism of this and similar Canons. Give instances from the Epistles or Apocalypse in which such Canons appear to you to have been rightly or wrongly applied.

5. Point out the peculiar difficulties met with in the attempt to determine the text of the Apocalypse. What Patristic evidence is particularly valuable with regard to the Old Latin Version of this Book?

6. Point out apparent references in the Epistles

(*a*) to the Lord's Prayer—
(*b*) to other sayings of our Lord—
(*c*) to the early Chapters of Genesis—
(*d*) to Apocryphal Books or Jewish traditions.

7. Compare and contrast the First Epistle of S. John with the Fourth Gospel, in relation to (1) its style and diction, (2) its presentation of spiritual truths.

8. Translate with notes critical and explanatory:

(*a*) *ἀλλὰ τί λέγει αὐτῷ ὁ χρηματισμός; Κατέλιπον ἐμαυτῷ ἑπτακισχιλίους ἄνδρας, οἵτινες οὐκ ἔκαμψαν γόνυ τῇ Βάαλ. οὕτως οὖν καὶ ἐν τῷ νῦν καιρῷ λεῖμμα κατ' ἐκλογὴν χάριτος γέγονεν. εἰ δὲ χάριτι, οὐκ ἔτι ἐξ ἔργων· ἐπεὶ ἡ χάρις οὐκ ἔτι γίνεται χάρις. εἰ δὲ ἐξ ἔργων, οὐκ ἔτι ἐστὶ χάρις· ἐπεὶ τὸ ἔργον οὐκ ἔτι ἐστιν ἔργον. τί οὖν; ὃ ἐπιζητεῖ Ἰσραήλ, τούτου οὐκ ἐπέτυχεν, ἡ δὲ ἐκλογὴ ἐπέτυχεν, οἱ δὲ λοιποὶ ἐπωρώθησαν, καθὼς γέγραπται, Ἔδωκεν αὐτοῖς ὁ Θεὸς πνεῦμα κατανύξεως, ὀφθαλμοὺς τοῦ μὴ βλέπειν, καὶ ὦτα τοῦ μὴ ἀκούειν, ἕως τῆς σήμερον ἡμέρας.*

(*b*) καὶ ἐὰν ψωμίσω πάντα τὰ ὑπάρχοντά μου, καὶ ἐὰν παραδῶ τὸ σῶμά μου ἵνα καυθήσωμαι, ἀγάπην δὲ μὴ ἔχω, οὐδὲν ὠφελοῦμαι. ἡ ἀγάπη μακροθυμεῖ, χρηστεύεται· ἡ ἀγάπη οὐ ζηλοῖ· ἡ ἀγάπη οὐ περπερεύεται, οὐ φυσιοῦται, οὐκ ἀσχημονεῖ, οὐ ζητεῖ τὰ ἑαυτῆς, οὐ παροξύνεται, οὐ λογίζεται τὸ κακὸν, οὐ χαίρει ἐπὶ τῇ ἀδικίᾳ, συγχαίρει δὲ τῇ ἀληθείᾳ, πάντα στέγει, πάντα πιστεύει, πάντα ἐλπίζει, πάντα ὑπομένει.

(*c*) τί οὖν ὁ νόμος; τῶν παραβάσεων χάριν προσετέθη, ἄχρις οὗ ἔλθῃ τὸ σπέρμα ᾧ ἐπήγγελται, διαταγεὶς δι' ἀγγέλων ἐν χειρὶ μεσίτου· ὁ δὲ μεσίτης ἑνὸς οὐκ ἔστιν, ὁ δὲ Θεὸς εἷς ἐστίν.

(*d*) ἢ δοκεῖτε ὅτι κενῶς ἡ γραφὴ λέγει, Πρὸς φθόνον ἐπιποθεῖ τὸ πνεῦμα ὃ κατῴκησεν ἐν ἡμῖν; μείζονα δὲ δίδωσι χάριν· διὸ λέγει Ὁ Θεὸς ὑπερηφάνοις ἀντιτάσσεται, ταπεινοῖς δὲ δίδωσι χάριν.

(*e*) καὶ τῷ ἀγγέλῳ τῆς ἐκκλησίας Λαοδικέων γράψον, Τάδε λέγει ὁ Ἀμὴν, ὁ μάρτυς ὁ πιστὸς καὶ ἀληθινὸς, ἡ ἀρχὴ τῆς κτίσεως τοῦ Θεοῦ· Οἶδά σου τὰ ἔργα, ὅτι οὔτε ψυχρὸς εἶ οὔτε ζεστός· ὄφελον ψυχρὸς εἶης ἢ ζεστός.

9. Without translating discuss any difficulties in the following passages.

(*a*) καὶ γάρ ἐσμεν εὐηγγελισμένοι καθάπερ κἀκεῖνοι, ἀλλ' οὐκ ὠφέλησεν ὁ λόγος τῆς ἀκοῆς ἐκείνους, μὴ συνκεκερασμένους τῇ πίστει τοῖς ἀκούσασιν.

(*b*) σωθήσεται δὲ διὰ τῆς τεκνογονίας, ἐὰν μείνωσιν ἐν πίστει καὶ ἀγάπῃ καὶ ἁγιασμῷ μετὰ σωφροσύνης.

(*c*) ἥξει δὲ ἡμέρα Κυρίου ὡς κλέπτης, ἐν ᾗ οἱ οὐρανοὶ ῥοιζηδὸν παρελεύσονται, στοιχεῖα δὲ καυσούμενα λυθήσεται, καὶ γῆ καὶ τὰ ἐν αὐτῇ ἔργα εὑρεθήσεται.

(*d*) ἔστιν ἁμαρτία πρὸς θάνατον· οὐ περὶ ἐκείνης λέγω ἵνα ἐρωτήσῃ. πᾶσα ἀδικία ἁμαρτία ἐστίν, καὶ ἔστιν ἁμαρτία οὐ πρὸς θάνατον.

(*e*) καὶ ἐξῆλθαν οἱ ἑπτὰ ἄγγελοι [οἱ] ἔχοντες τὰς ἑπτὰ πληγὰς ἐκ τοῦ ναοῦ, ἐνδεδυμένοι λίθον καθαρὸν λαμπρὸν καὶ περιεζωσμένοι περὶ τὰ στήθη ζώνας χρυσᾶς.

10. Explain the following words and expressions, illustrating their usage in the Epistles or Apocalypse,

ἐριθεία—πληροφορεῖσθαι—ὁ χοϊκός—συστατικαὶ ἐπιστολαί—ἑτεροζυγεῖν—κανών—μονογενής—ἀρραβών—στρηνιᾶν—ὁ Παντοκράτωρ.

11. Distinguish between the following synonymous words:

θρησκεία, λατρεία, λειτουργία—ἀπολύτρωσις, καταλλαγή, ἱλασμός—ἀποκάλυψις, ἐπιφάνεια, φανέρωσις—δημιουργός, τεχνίτης—στέφανος, διάδημα.

12. Retranslate, criticising the renderings and stating the main authorities for important variations in the Greek text,

(*a*) Our conversation is in heaven, from whence also we look for the Saviour, the Lord Jesus Christ; who shall change our vile body that it may be fashioned like unto His glorious body.

(*b*) We were gentle among you, even as a nurse cherisheth her own children.

(*c*) We have also a more sure word of prophecy; whereunto ye do well that ye take heed, as unto a light that shineth in a dark place, until the day dawn, and the day star arise in your hearts.

(*d*) Unto Him that loved us and washed us from our sins in His own blood.

(*e*) Miserum me, quis liberaret de corpore mortis hujus nisi gratia tua per Jesum Christum Dominum nostrum?

(*f*) In te non est transmutatio nec momenti obumbratio.

(*g*) Omnis spiritus qui solvit Jesum non est ex Deo.

13. Explain the following notes, stating in each case the approximate date and the locality of the several authorities mentioned,

(*a*) 2 Cor. iii. 3 (†) *πλαξὶν καρδίαις σαρκίναις*] *καρδίας* for *καρδίαις* (probably Western and) Syrian (Gr. Lat. Syr. Eg. Æth. Arm. Goth.); incl. F_2 (doubtless by assimilation to the annexed lat.vg) [Iren.lat.txt] Orig. *Ps.* (from a single catena); *Rom.* lat. Ruf[s] [Adamant txt] Did. *Ps.* i (p. 272 Cord.) Cyr.*loc.* (*s.q.*); *Is.* 504 (*s.q.*). Text ℵABCD$_2$G$_2$L$_2$P$_2$ cu[35] syr.hl Iren.com (? Clem.*Paed.* 307) Eus.*Mart.*

(*b*) *θεου* (Gb′) cum ℵ*ABCD°EFGKL al[70] cdd[27] ap Aug et ap Amb (vide post) g vg[cod] (ap Gb) cdd[lat] ap Aug cop syr[p mg] Eus[pe 449] Ath[388] Euthal[cod] Thdrt ad h. l. et[3,1047 cod] Dam. al. Sic autem Aug[trin 1,13(8,756)]: "*Nos enim sumus circumcisio, spiritui dei servientes*, quod est in Graeco λατρευοντεσ." *θεω* cum ℵ°D*P al mu d e f m vg go syr[sch] et[p txt] arm aeth Chr[316. 317. 318] (*οι πνευματι θεω λατρευοντεσ, τουτεστιν οι πνευματικωσ λατρευοντεσ*) Thrdt[3,1047 ed] al Or[int 2,68. 280] et[3,857] et[4,457. 459] Victorin Ambrst.

CROSSE SCHOLARSHIP.

WEDNESDAY, *November* 28, 1883. 9—12.

1. TRANSLATE, with short notes:

(*a*) Hosea viii. 1—7.

v. 1. Examine the meaning of תורתי, בריתי.

v. 4. Explain and illustrate the construction of כספם . . . עצבים. In what other ways might it be expressed?

v. 7. Explain and illustrate the form סופתה.

(*β*) Psalm lxxiii. 1—15.

v. 1. Annotate אך.

v. 2. Point the כתיב and discuss the readings.

v. 4. Annotate חרצבות.

Explain the forms פָּרַי (*v.* 1); ענקתמו (*v.* 6); תִּנְהָלֵנִי (*v.* 9).

Paraphrase *vv.* 10—15 so as to bring out the meaning.

2. Add vowel points and the accents Athnach and Silluq to:

וישמן ישרון ויבעט שמנת עבית כשית
ויטש אלוה עשהו וינבל צור ישעתו :
יקנאהו בזרים בתועבת יכעיסהו :
יזבחו לשדים לא אלה אלהים לא ידעום
חדשים מקרב באו לא שערום אבתיכם :
צור ילדך תשי ותשכח אל מחללך :
וירא יהוה וינאץ מכעס בניו ובנתיו
ויאמר אסתירה פני מהם אראה מה אחריתם
כי דור תהפכות המה בנים לא אמן בם :

3. Translate into pointed HEBREW:

Fili, accepisti Spiritum sanctum ad robur. Ne sis igitur pusillanimis. Confortare et noli timere; esto fortis in bello, et pugna viriliter.

Quantumcunque sis infirmus, memento quoniam elegi te ut fortia quaeque per te confundam.

Quantumlibet dura cervice sint quos debellare debes, memento quoniam dedi frontem tuam duriorem frontibus eorum.

Etiamsi totus mundus contra te armaretur, ne paveas repentino terrore: ego qui vici mundum tecum sum tanquam bellator fortis: idcirco cadent et infirmi erunt.

C. ARVISENET.

4. Discuss fully *one* of the following:

(*a*) the date and authorship of Deuteronomy,

(*b*) the date and authorship of Ecclesiastes,

(*c*) the date and historical character of Ruth, and its position among the Hagiographa.

5. Investigate carefully the meaning of

(*a*) רוח יהוה (אלהים)

or

(*b*) מלאך יהוה (אלהים)

6. Point out the importance of the work of *one* of the following to the religion of Israel:—

Samuel: Elijah: Haggai.

7. Discuss the relation of the prophets to the Mosaic law.

8. By what names are miracles designated in the Old Testament? What is the special significance of each of them?

9. Examine *one* of the following groups of synonyms:

(α) אהבה, חסד, חן, רחמים:

(β) חטאת, עון, פשע, רשע:

(γ) ישר, צדיק, קדוש, תמים:

WEDNESDAY, *November* 28, 1883. 1—4.

1. "THERE is the amplest historical evidence that the belief in gods is immeasurably more natural to the human mind than the belief in one Author and Ruler of nature: and that this more elevated belief is, compared with the former, an artificial product, requiring (except when impressed by early education) a considerable amount of intellectual culture before it can be reached." J. S. MILL.

Discuss this statement.

2. Give some account of the Manichean system; its origin; its relation to Christianity; its view of the Person of the Saviour:

and of the worship of Mithra; its conception and its extent. Mention any references to the latter in early Christian writers.

3. What was meant by the words in the Arian belief (condemned at Nicæa), *ἐξ οὐκ ὄντων ἐγένετο*? Trace to some extent the history of the words *οὐσία, ὁμοούσιος*. What reason would you assign for the omission, in the later Creeds, of the Nicene expression *τοῦτ' ἐστὶν ἐκ τῆς οὐσίας τοῦ Πατρός*? [*γεννηθέντα ἐκ τοῦ Πατρὸς μονογενῆ· τοῦτ' ἐστὶν ἐκ τ. οὐ. τοῦ* Π.]

4. Give a brief history of the "twenty-eighth Canon" of the Council of Chalcedon (on the dignity of the See of Constantinople).

5. What were the chief contributions of Jerome to Ecclesiastical Literature? What special work did he accomplish on the Psalms?

6. Mention any portions of the Greek and of the Latin service-books which we must recognize as being in use in the second, third, fourth centuries. What are the oldest hymns which survive in Greek?

7. Give a history of the dogmas relating to the Blessed Virgin and of the growth of the cultus shewn to her. What do we learn on the subject from early liturgical expressions? What is meant by "Dogma"?

8. How would you exhibit the chief differences between authorized formularies of the English Church and those of other Christian bodies on justification and sanctification? Translate and paraphrase James ii. 14, *τί τὸ ὄφελος, ἀδελφοί μου, ἐὰν πίστιν λέγῃ τις ἔχειν, ἔργα δὲ μὴ ἔχῃ; μὴ δύναται ἡ πίστις σῶσαι αὐτόν*;

9. "Deinde crudelis illorum impietas in baptismum irruit, quem infantibus impartiri nolunt; sed omnino, nulla ratione." [REFORMATIO LEGUM ECCLESIASTICARUM. A.D. 1571, *De Hæresibus*.] Who are referred to here? How is the duty of baptising infants upheld (1) by Scripture, (2) from history?

10. Give some account of the personal histories of Laelius and Faustus Socinus. What is the *Catechesis Racoviensis*, which is frequently referred to by Bishop Pearson? What can you tell of the later political history of the Body named Socinians?

How would you sum up the practical consequences of the differences of faith between them and members of the Church of England?

11. Explain carefully the words *προσδοκῶμεν ἀνάστασιν νεκρῶν καὶ ζωὴν τοῦ μέλλοντος αἰῶνος*.

Illustrate the meaning of the words *ζωή* and *ζωὴ αἰώνιος* as we find them used in St John's writings and by St Paul.

12. Give an historical statement of questions raised in reference to the *ἀπολύτρωσις* effected by our Lord.

THURSDAY, *November* 29, 1883. 9—12.

(A)

1. COMPARE as fully as you can the accounts of the institution of the Holy Eucharist given by St Mark and St Luke, noticing any various readings which occur in the texts. What light do the early Liturgies throw on the sense of the words *τοῦτο ποιεῖτε εἰς τὴν ἐμὴν ἀνάμνησιν?*

2. Translate:

(1) *Ἔλεγον οὖν αὐτῷ Σὺ τίς εἶ; εἶπεν αὐτοῖς ὁ Ἰησοῦς Τὴν ἀρχὴν ὅτι καὶ λαλῶ ὑμῖν; πολλὰ ἔχω περὶ ὑμῶν λαλεῖν καὶ κρίνειν· ἀλλ' ὁ πέμψας με ἀληθής ἐστιν, κἀγὼ ἃ ἤκουσα παρ' αὐτοῦ ταῦτα λαλῶ εἰς τὸν κόσμον. οὐκ ἔγνωσαν ὅτι τὸν πατέρα αὐτοῖς ἔλεγεν. εἶπεν οὖν ὁ Ἰησοῦς Ὅταν ὑψώσητε τὸν υἱὸν τοῦ ἀνθρώπου, τότε γνώσεσθε ὅτι ἐγώ εἰμι, καὶ ἀπ' ἐμαυτοῦ ποιῶ οὐδέν, ἀλλὰ καθὼς ἐδίδαξέν με ὁ πατὴρ ταῦτα λαλῶ. καὶ ὁ πέμψας με μετ' ἐμοῦ ἐστίν· οὐκ ἀφῆκέν με μόνον, ὅτι ἐγὼ τὰ ἀρεστὰ αὐτῷ ποιῶ πάντοτε.*

Give notes on *τὴν ἀρχήν...ὑμῖν, ἀλλ' ὁ πέμψας..., ἐγώ εἰμι, ἀφῆκε.*

(2) *Ὑποπνεύσαντος δὲ νότου δόξαντες τῆς προθέσεως κεκρατηκέναι ἄραντες ἆσσον παρελέγοντο τὴν Κρήτην. μετ' οὐ πολὺ δὲ ἔβαλεν κατ' αὐτῆς ἄνεμος τυφωνικὸς ὁ καλούμενος Εὐρακύλων· συναρπασθέντος δὲ τοῦ πλοίου καὶ μὴ δυναμένου ἀντοφθαλμεῖν τῷ ἀνέμῳ ἐπιδόντες ἐφερόμεθα. νησίον δέ τι ὑποδραμόντες καλούμενον Καῦδα ἰσχύσαμεν μόλις περικρατεῖς γενέσθαι τῆς σκάφης, ἣν ἄραντες βοηθείαις ἐχρῶντο ὑποζωννύντες τὸ πλοῖον· φοβούμενοί τε μὴ εἰς τὴν Σύρτιν ἐκπέσωσιν, χαλάσαντες τὸ σκεῦος, οὕτως ἐφέροντο.*

Give notes on *εὐρακύλων, ἐπιδόντες, χαλάσαντες τὸ σκεῦος.*

3. Give, with any comments on the translation, the original of the following passages of the A. V.:

(1) Go ye therefore, and teach all nations, baptizing them in the name of the Father, and of the Son, and of the Holy Ghost: teaching them to observe all things whatsoever I have commanded you: and, lo, I am with you alway, even unto the end of the world. Amen.

(2) Lord, now lettest thou thy servant depart in peace, according to thy word: for mine eyes have seen thy salvation, which thou hast prepared before the face of all people; a light to lighten the Gentiles, and the glory of thy people Israel.

4. State the original contexts and application of the following passages, and examine the use made of them in the New Testament, noticing any variations from the Hebrew text or from the LXX.:

(1) *Αὐτὸς τὰς ἀσθενείας ἡμῶν ἔλαβεν καὶ τὰς νόσους ἐβάστασεν.*

(2) Λίθον ὃν ἀπεδοκίμασαν οἱ οἰκοδομοῦντες,
οὗτος ἐγενήθη εἰς κεφαλὴν γωνίας.

(3) Ἐγὼ εἶπα, θεοί ἐστε.

(4) Ἀνελάβετε τὴν σκηνὴν τοῦ Μολόχ
καὶ τὸ ἄστρον τοῦ θεοῦ Ῥομφά,
τοὺς τύπους οὓς ἐποιήσατε προσκυνεῖν αὐτοῖς.
καὶ μετοικιῶ ὑμᾶς ἐπέκεινα Βαβυλῶνος.

5. Mention the various readings which are found in the following texts with any details of evidence which you may remember:

(1) τοῦ δὲ Ἰησοῦ Χριστοῦ ἡ γέννησις οὕτως ἦν.

(2) οὐχ οὗτός ἐστιν ὁ τέκτων;

(3) ἐλθέτω ἡ βασιλεία σου.

(4) πέραν τοῦ χειμάρρου τῶν Κέδρων.

(5) ποιμαίνειν τὴν ἐκκλησίαν τοῦ θεοῦ ἣν περιεποιήσατο διὰ τοῦ αἵματος τοῦ ἰδίου.

6. Write notes on the following words and phrases, marking the contexts in which they are found:

ἀνθυπατεύειν, διαβλέπειν, ἐκ δεξιῶν τῆς δυνάμεως, ἐμβριμᾶσθαι, ἐξομολογεῖσθαι, μονογενής, πτερύγιον, Ῥαββουνεί, σάββατον δευτερόπρωτον, στιβάδες, συναλίζεσθαι, τετράρχης.

(B)

7. Translate carefully, examining the more important words, and explain with reference to the context

(1) Οὐκ ἔστιν αὕτη ἡ σοφία ἄνωθεν κατερχομένη, ἀλλὰ ἐπίγειος, ψυχική, δαιμονιώδης· ὅπου γὰρ ζῆλος καὶ ἐριθία, ἐκεῖ ἀκαταστασία καὶ πᾶν φαῦλον πρᾶγμα.

(2) Εἰς τοῦτο γὰρ καὶ νεκροῖς εὐηγγελίσθη ἵνα κριθῶσι μὲν κατὰ ἀνθρώπους σαρκὶ ζῶσι δὲ κατὰ θεὸν πνεύματι.

(3) Ἐν τούτῳ γνωσόμεσθα ὅτι ἐκ τῆς ἀληθείας ἐσμέν, καὶ ἔμπροσθεν αὐτοῦ πείσομεν τὴν καρδίαν ἡμῶν ὅτι ἐὰν καταγινώσκῃ ἡμῶν ἡ καρδία, ὅτι μείζων ἐστὶν ὁ θεὸς τῆς καρδίας ἡμῶν καὶ γινώσκει πάντα.

(4) Μόλις γὰρ ὑπὲρ δικαίου τις ἀποθανεῖται· ὑπὲρ γὰρ τοῦ ἀγαθοῦ τάχα τις καὶ τολμᾷ ἀποθανεῖν.

(5) Τοίνυν ἐξερχώμεθα πρὸς αὐτὸν ἔξω τῆς παρεμβολῆς, τὸν ὀνειδισμὸν αὐτοῦ φέροντες.

8. Write down the original text of the following passages of the Authorised Version, noting points that specially deserve attention:—

(1) Not as though I had already attained, either were already perfect: but I follow after, if that I may apprehend that for which also I am apprehended of Christ Jesus. Brethren, I count not myself to have apprehended: but this one thing I do, forgetting those things which are behind, and reaching forth unto those things which are before, I press toward the mark, for the prize of the high calling of God in Christ Jesus.

(2) For by him were all things created that are in heaven, and that are in earth, visible and invisible, whether they be thrones, or dominions, or principalities, or powers: all things were created by him, and for him. And he is before all things, and by him all things consist. And he is the head of the body, the Church: who is the beginning, the firstborn from the dead, that in all things he might have the preeminence.

9. Indicate any important points in which the translation of the following passages appears to you to need correction, whether on textual or on any other grounds:—

(1) Finally be ye all of one mind, having compassion one of another, love as brethren, be pitiful, be courteous.

(2) These are spots in your feasts of charity, when they feast with your feeding themselves without fear.

(3) Old things are passed away; behold, all things are become new.

(4) O foolish Galatians, who hath bewitched you, that you should not obey the truth, before whose eyes Jesus Christ hath been evidently set forth, crucified among you?

(5) He therefore that despiseth, despiseth not man but God, who hath also given unto us his holy Spirit.

(6) For I am now ready to be offered, and the time of my departure is at hand.

(7) Just and true are thy ways, thou king of saints.

(8) Blessed are they that do his commandments, that they may have right to the tree of life.

10. Compare together the evidence respecting congregational organisation afforded by the First Epistle to the Corinthians and by the Pastoral Epistles, and explain its relation to the teaching of the Epistle to the Ephesians.

11. Draw out clearly the most characteristic commendations, warnings, and promises in each of the Epistles to the Seven Churches. What sequence or sequences can you trace in them?

12. Write notes on the following words, mentioning the leading passages of the New Testament in which they occur:—

ἀνακεφαλαιοῦμαι, ἥττημα, θυσιαστήριον, ἱστορέω, κτίσις, κυριακός, περιποίησις, προσφορά, σφραγίζω, φύραμα.

THURSDAY, *November* 29, 1883. 1—4.

HISTORY.

1. POINT out the different character of the Judaism of Palestine and that of Alexandria during the first century. What effect had the overthrow of Jerusalem on the spread of Christianity?

2. Translate with brief notes:

Igitur quoniam adhuc contendunt Iudaei, necdum venisse Christum, quem tot modis approbavimus venisse, recognoscant Iudaei exitum suum, quem post adventum Christi relaturi praecinebantur ob impietatem, qua eum et despexerunt et interfecerunt. Primo enim, ex qua die, secundum dictum Esaiae, proiecit homo abominamenta sua aurea et argentea, quae fecerunt adorandis vanis et nocivis, id est, ex quo gentes nos dilucidato pectore per Christi veritatem proiecimus idola (videant Iudaei), et quod sequitur expunctum est: tulit enim dominus sabaoth in Iudaeis et ab Hierusalem inter cetera et sapientem architectum, qui aedificat ecclesiam dei templum et civitatem sanctam et domum domini. Nam exinde destitit apud illos dei gratia. Et mandatum est nubibus, ne pluerent imbrem super vineam Sorech, id est coelestibus beneficiis, ne provenirent domui Israel. Fecerat enim spinas, ex quibus Christum coronaverat, et non iustitiam, sed clamorem, quo in crucem eum extorserat. Et ita subtractis charismatis prioribus, lex et prophetae usque ad Ioannem fuerunt, et piscina Bethsaida usque ad adventum Christi, curando valetudines ab Israel, desiit a beneficiis deinde, cum ex perseverantia furoris sui nomen domini per ipsos blasphemaretur, sicut scriptum est: propter vos nomen dei blasphematur in gentibus.

3. Give some account of the introduction and the spreading of Christianity in Southern Gaul. Who were the most conspicuous leaders of the early church in that country, and what effect did the Gallican church exercise on the observances of other churches in Western Christendom?

4. Describe the spread of Christianity in North Africa down to the time of St Augustine, noting specially the influence therein of Cyprian, bishop of Carthage.

5. Write a brief notice of St Chrysostom, giving some account of his writings, especially as an expositor of Scripture.

6. Give a sketch of the growth of Monasticism both in the East and West down to the time of St Benedict. Write an account of the Benedictine rule, and translate the following passage from Athanasius' Life of St Anthony:

Οὕτω μὲν οὖν ἑαυτὸν ἄγων, ἠγαπᾶτο παρὰ πάντων ὁ Ἀντώνιος· αὐτὸς δὲ τοῖς σπουδαίοις, πρὸς οὓς ἀπήρχετο, γνησίως ὑπετάσσετο, καὶ καθ' ἑαυτὸν ἑκάστου τὸ πλεονέκτημα τῆς σπουδῆς καὶ τῆς ἀσκήσεως κατεμάνθανε· καὶ τοῦ

μὲν τὸ χαρίεν, τοῦ δὲ τὸ πρὸς τὰς εὐχὰς σύντονον ἐθεώρει· καὶ ἄλλου μὲν τὸ ἀόργητον, ἄλλου δὲ τὸ φιλάνθρωπον κατενόει· καὶ τῷ μὲν ἀγρυπνοῦντι, τῷ δὲ φιλολογοῦντι προσεῖχε· καὶ τὸν μὲν ἐν καρτερίᾳ, τὸν δὲ ἐν νηστείαις καὶ χαμευνίαις ἐθαύμαζε· καὶ τοῦ μὲν τὴν πραότητα, τοῦ δὲ τὴν μακροθυμίαν παρετηρεῖτο· πάντων δὲ ὁμοῦ τὴν εἰς τὸν Χριστὸν εὐσέβειαν, καὶ τὴν πρὸς ἀλλήλους ἀγάπην ἐσημειοῦτο· καὶ οὕτω πεπληρωμένος, ὑπέστρεφεν εἰς τὸν ἴδιον τοῦ ἀσκητηρίου τόπον· λοιπὸν αὐτὸς τὰ παρ' ἑκάστου συνάγων εἰς ἑαυτὸν, καὶ σπουδάζων ἐν ἑαυτῷ τὰ πάντων δεικνύναι· καὶ γὰρ πρὸς τοὺς καθ' ἡλικίαν ἴσους οὐκ ἦν φιλόνεικος, ἢ μόνον ἵνα μὴ δεύτερος ἐκείνων ἐν τοῖς βελτίοσι φαίνηται· καὶ τοῦτο ἔπραττεν ὥστε μηδένα λυπεῖν, ἀλλὰ κἀκείνους ἐπ' αὐτῷ χαίρειν.

7. Compare the doctrine and ceremonial of the Western Church at the close of the sixth century with that which prevailed at the close of the third.

8. Write brief notices of the following persons: St Boniface, Hincmar, Photius, Berengarius, Grossteste, John Wessel.

9. Describe the religious condition of Spain (Jewish as well as Christian) at the time of the Saracen conquest of that country.

10. Who were the authors and what the subjects of the following works?—

Libri Carolini.—Cur Deus Homo.—The Utopia.

11. What attempts were made under the Plantagenet monarchs to abate the power of the clergy in England and with what success? By what circumstances had that power become unduly developed?

12. Give an outline of the events which immediately preceded and the results which followed the Council of Constance.

13. What circumstances rendered the Reformation possible in the reign of Henry VIII. which was not successful when attempted under Edward III.?

14. Give some account of the rise of Presbyterianism in England, and a sketch of the present condition of the Presbyterians in Scotland, and the causes which have led to their disunion.

JEREMIE PRIZES.

FRIDAY, *December* 7, 1883. 9—12.

JOEL. AMOS. PROVERBS I—XVI.

I. TRANSLATE the following passages:

(1) *οἴμοι οἴμοι οἴμοι εἰς ἡμέραν, ὅτι ἐγγὺς ἡ ἡμέρα κυρίου, καὶ ὡς ταλαιπωρία ἐκ ταλαιπωρίας ἥξει. κατέναντι τῶν ὀφθαλμῶν ὑμῶν βρώματα ἐξωλοθρεύθη, ἐξ οἴκου θεοῦ ὑμῶν εὐφροσύνη καὶ χαρά. ἐσκίρτησαν δαμάλεις ἐπὶ ταῖς φάτναις αὐτῶν, ἠφανίσθησαν θησαυροί, κατεσκάφησαν ληνοί, ὅτι ἐξηράνθη σῖτος.*

For *ἐσκίρτησαν...αὐτῶν* Symmachus reads *ηὐρωτίασε σιτοδοχεῖα ἀπὸ τῶν χρισμάτων αὐτῶν.* Explain the two renderings in connexion with the original text.

Comment on *ταλαιπωρία ἐκ ταλαιπωρίας ἥξει.*

(2) *ἀνελάβετε τὴν σκηνὴν τοῦ Μολὸχ καὶ τὸ ἄστρον τοῦ θεοῦ ὑμῶν Ῥαιφάν, τοὺς τύπους οὓς ἐποιήσατε ἑαυτοῖς· καὶ μετοικιῶ ὑμᾶς ἐπέκεινα Δαμασκοῦ.*

Theodotion gives *καὶ ἤρατε τὴν ὅρασιν τοῦ βασιλέως ὑμῶν, ἀμαύρωσιν εἰδώλων ὑμῶν, ἄστρον τοῦ θεοῦ ὑμῶν.*

Comment on the two renderings. What use is made of the passage in the New Testament?

(3) *ἐνδέεσιν φρονήσεως παρακελεύομαι λέγουσα Ἄρτων κρυφίων ἡδέως ἅψασθε καὶ ὕδατος κλοπῆς γλυκεροῦ. ὁ δὲ οὐκ οἶδεν ὅτι γηγενεῖς παρ' αὐτῇ ὄλλυνται καὶ ἐπὶ πέταυρον ᾅδου συναντᾷ.*

For the last clause A. Σ. Θ. *καὶ ἐπὶ τοῖς βαθέσι τοῦ ᾅδου οἱ κλητοὶ αὐτῆς.* How do you account for the difference?

II. Explain the following phrases with reference to the original text:

(1) *πᾶν πρόσωπον ὡς πρόσκαυμα χύτρας.*

(2) *πᾶσα Γαλιλαία ἀλλοφύλων.*

A. *θῖνες.* Σ. *ὅρια.*

(3) *ἔλαβον ἐκ τῶν νεανίσκων ὑμῶν εἰς ἁγιασμόν.*

(4) *ἀπαγγέλλων εἰς ἀνθρώπους τὸν χριστὸν αὐτοῦ.*

A. *τίς ἡ ὁμιλία αὐτοῦ.* Σ. *τὸ φώνημα αὐτοῦ.* Θ. *...τὸν λόγον αὐτοῦ.* E′ *...ἡ ἀδολεσχία αὐτοῦ.*

(5) καὶ ἰδοὺ βροῦχος εἷς Γὼγ ὁ βασιλεύς.

A. καὶ ἰδοὺ ὄψιμος ὀπίσω τῆς γάζης τοῦ βασιλέως. Θ. μετὰ τὴν κουρὰν τοῦ βασιλέως.

(6) οὐ μὴ ὀχλαγωγήσῃς ἐπὶ τὸν οἶκον Ἰακώβ.

(7) τὸ ἱλαστήριον.

A. τὸ οἰκοδόμημα. Σ. Θ. τὸ κιβώριον.

(8) ὃν γὰρ ἀγαπᾷ κύριος παιδεύει, μαστιγοῖ δὲ πάντα υἱὸν ὃν παραδέχεται.

(9) κύριος ἔκτισέν με ἀρχὴν ὁδῶν αὐτοῦ εἰς ἔργα αὐτοῦ.

Θ. κύριος ἐκτήσατό με ἀρχὴν (A. κεφάλαιον) ὁδοῦ αὐτοῦ, πρὸ τῆς ἐργασίας αὐτοῦ ἀπὸ τότε.

State shortly the use made of this passage in the Arian controversy.

(10) εἰς κόλπους ἐπέρχεται πάντα τοῖς ἀδίκοις· παρὰ δὲ κυρίου πάντα τὰ δίκαια.

III. Give examples (1) from the version of Amos of false renderings occasioned by mistakes as to proper names; and (2) from the version of the Proverbs of duplicate renderings incorporated in the Greek text; and (3) of variations from the Hebrew text due to the confusion of similar letters.

IV. Illustrate the usage of the following words:

αἰσθητικός, ἄξων, γυνὴ ὕπανδρος, ἐξετασμός, παραρρύειν, περιχαρακοῦν, σειρομάστης, ὁ χειμάρρους τῶν σχοίνων, ὁ χ. τῶν δυσμῶν.

V. Examine the doctrine of Wisdom in Proverbs as a preparation for the revelation of the Incarnate Word.

THE EPISTLE OF BARNABAS.

I. COMPARE shortly the treatment of the Old Testament Scriptures in this Epistle with that in the Apostolic Epistles. Mention any apocryphal additions which are found in the quotations of the LXX.

II. Translate the following passages:

(1) εἰς τοῦτο οὖν, ἀδελφοί, ὁ μακρόθυμος προβλέψας, ὡς ἐν ἀκεραιοσύνῃ πιστεύσει ὁ λαὸς ὃν ἡτοίμασεν ἐν τῷ ἠγαπημένῳ αὐτοῦ, προεφανέρωσεν ἡμῖν περὶ πάντων, ἵνα μὴ προσρησσώμεθα ὡς ἐπήλυτοι τῷ ἐκείνων νόμῳ.

Explain ἐπήλυτοι.

(2) τί δὲ ὅτι τὸ ἔριον εἰς μέσον τῶν ἀκανθῶν τιθέασιν; τύπος ἐστὶν τοῦ Ἰησοῦ τῇ ἐκκλησίᾳ θέμενος, ὅτι ὃς ἐὰν θέλῃ τὸ ἔριον ἆραι τὸ κόκκινον, δεῖ αὐτὸν πολλὰ παθεῖν διὰ τὸ εἶναι φοβερὰν τὴν ἄκανθαν, καὶ θλιβέντα κυριεῦσαι αὐτοῦ· Οὕτως, φησίν, οἱ θέλοντές με ἰδεῖν καὶ ἅψασθαί μου τῆς βασιλείας ὀφείλουσιν θλιβέντες καὶ παθόντες λαβεῖν με.

What variations from the Levitical ritual are found in the account of the ceremonial of the Day of Atonement given by Barnabas? How do you explain them?

(3) εἶτα τί λέγει; Καὶ ἦν ποταμὸς ἕλκων ἐκ δεξιῶν, καὶ ἀνέβαινεν ἐξ αὐτοῦ δένδρα ὡραῖα· καὶ ὃς ἂν φάγῃ ἐξ αὐτῶν ζήσεται εἰς τὸν αἰῶνα. τοῦτο λέγει ὅτι ἡμεῖς μὲν καταβαίνομεν εἰς τὸ ὕδωρ γέμοντες ἁμαρτιῶν καὶ ῥύπου, καὶ ἀναβαίνομεν καρποφοροῦντες ἐν τῇ καρδίᾳ, καὶ τὸν φόβον καὶ τὴν ἐλπίδα εἰς τὸν Ἰησοῦν ἐν τῷ πνεύματι ἔχοντες.

Examine the teaching of Barnabas on Baptism.

(4) ἕως ἔτι τὸ καλὸν σκεῦός ἐστιν μεθ' ὑμῶν, μὴ ἐλλίπητε μηδενὶ αὐτῶν, ἀλλὰ συνεχῶς ἐκζητεῖτε ταῦτα καὶ ἀναπληροῦτε πᾶσαν ἐντολήν· ἔστιν γὰρ ἄξια. διὸ μᾶλλον ἐσπούδασα γράψαι ἀφ' ὧν ἠδυνήθην, εἰς τὸ εὐφρᾶναι ὑμᾶς. Σώζεσθε, ἀγάπης τέκνα καὶ εἰρήνης. ὁ κύριος τῆς δόξης καὶ πάσης χάριτος μετὰ τοῦ πνεύματος ὑμῶν.

Illustrate the language from the New Testament.

III. Emend, translate and explain:

τρια ουν δογματα εστιν κυριου ζωη πιστις ελπις αρχη και τελος ημων και δικαιοσυνη κρισεως αρχη και τελος αγαπη ευφροσυνη και αγαλλιασεως εργων εν δικαιοσυναις μαρτυρια.

What materials are available for the criticism of the text? Illustrate by examples the value and defects of the Old Latin Version.

IV. Give as fully as you can the references in this Epistle to facts or words recorded in the Gospels. Does Barnabas appear to have been acquainted with the Gospel of St John?

V. Mention, without discussion, the existing testimony to the use of this Epistle in the first six centuries.

VI. Explain, with references to the context, διάσταλμα, ἔμφυτος, προσάγειν, πρόγλωσσος, πυγμή, ἄνθρωπος γῆ ἐστὶν πάσχουσα, τοῦ λαοῦ τοῦ μεταξύ, οἱ δέκα λόγοι, ἐν τοῖς ἑξακισχιλίοις ἔτεσιν συντελεσθήσεται τὰ σύνπαντα, εἰς τέλος.

FRIDAY, *December* 7, 1883. 1—4.

NUMBERS IX.—XXXVI.

1. How far are the following statements of Jerome corroborated by existing MSS of the LXX?

Si Septuaginta Interpretum pura, et ut ab eis in Graecum versa est, editio permaneret, superflue me, mi Chromati, impelleres ut Hebraea volumina Latino sermone transferrem. Quod enim semel aures hominum occupaverat et nascentis ecclesiae roboraverat fidem justum erat nostro silentio comprobari...[Nunc vero] Alexandria et Aegyptus in Septuaginta suis Hesychium laudat auctorem: Constantinopolis usque Antiochiam Luciani martyris exemplaria probat. Mediae inter has provinciae Palaestinos codices legunt; quos ab Origene elaboratos Eusebius et Pamphilus vulgaverunt: totusque orbis hac inter se trifaria varietate compugnat.
[Praefatio ad libros Paralipomenon.]

2. Translate with such notes as you think fit:

α. ὅταν δὲ διαμάρτητε καὶ μὴ ποιήσητε πάσας τὰς ἐντολὰς ταύτας, ἃς ἐλάλησε κύριος πρὸς Μωϋσῆν, καθὰ συνέταξε κύριος πρὸς ὑμᾶς ἐν χειρὶ Μωϋσῆ, ἀπὸ τῆς ἡμέρας ᾗ συνέταξε κύριος πρὸς ὑμᾶς καὶ ἐπέκεινα εἰς τὰς γενεὰς ὑμῶν, καὶ ἔσται ἐὰν ἐξ ὀφθαλμῶν τῆς συναγωγῆς γένηται ἀκουσίως, καὶ ποιήσει πᾶσα ἡ συναγωγὴ μόσχον ἕνα ἐκ βοῶν ἄμωμον εἰς ὁλοκαύτωμα εἰς ὀσμὴν εὐωδίας κυρίῳ, καὶ θυσίαν τούτου καὶ σπονδὴν αὐτοῦ κατὰ τὴν σύνταξιν αὐτοῦ, καὶ χίμαρον ἐξ αἰγῶν ἕνα περὶ ἁμαρτίας· καὶ ἐξιλάσεται ὁ ἱερεὺς περὶ πάσης συναγωγῆς υἱῶν Ἰσραήλ, καὶ ἀφεθήσεται αὐτοῖς, ὅτι ἀκούσιόν ἐστι· καὶ αὐτοὶ ἤνεγκαν τὸ δῶρον αὐτῶν κάρπωμα κυρίῳ περὶ τῆς ἁμαρτίας αὐτῶν ἔναντι κυρίου περὶ τῶν ἀκουσίων αὐτῶν· καὶ ἀφεθήσεται πάσῃ συναγωγῇ υἱῶν Ἰσραὴλ καὶ τῷ προσηλύτῳ τῷ προσκειμένῳ πρὸς ὑμᾶς, ὅτι παντὶ τῷ λαῷ ἀκούσιον.
[xv. 22—26.]

What Hebrew word does *κάρπωμα* generally represent?

β. ἀνάστηθι Βαλὰκ καὶ ἄκουε, ἐνώτισαι μάρτυς υἱὸς Σεπφώρ. οὐχ ὡς ἄνθρωπος ὁ θεὸς διαρτηθῆναι, οὐδ' ὡς υἱὸς ἀνθρώπου ἀπειληθῆναι. αὐτὸς εἶπας οὐχὶ ποιήσει; λαλήσει, καὶ οὐχὶ ἐμμενεῖ; ἰδοὺ εὐλογεῖν παρείλημμαι· εὐλογήσω, καὶ οὐ μὴ ἀποστρέψω. οὐκ ἔσται μόχθος ἐν Ἰακώβ, οὐδὲ ὀφθήσεται πόνος ἐν Ἰσραήλ· κύριος ὁ θεὸς αὐτοῦ μετ' αὐτοῦ, τὰ ἔνδοξα ἀρχόντων ἐν αὐτῷ. ὁ θεὸς ὁ ἐξαγαγὼν αὐτὸν ἐξ Αἰγύπτου, ὡς δόξα μονοκέρωτος αὐτῷ. οὐ γάρ ἐστιν οἰωνισμὸς ἐν Ἰακώβ, οὐδὲ μαντεία ἐν Ἰσραήλ· κατὰ καιρὸν ῥηθήσεται τῷ Ἰακὼβ καὶ τῷ Ἰσραήλ, τί ἐπιτελέσει ὁ θεός. [xxiii. 18—23.]

How do other versions represent the Hebrew וַיְכַזֵּב?

τὰ ἔνδοξα ἀρχόντων ἐν αὐτῷ. 'Α. *καὶ ἀλαλαγμὸς βασιλέως ἐν αὐτῷ.* Σ. *καὶ σημασία βασιλέως ἐν αὐτῷ.* Θ. *καὶ σαλπισμὸς β. ἐν αὐτῷ.*

Comment on these translations.

What do we know as to the general features of the versions of Aquila and Symmachus and Theodotion?

γ. φησὶ Βαλαὰμ *υἱὸς* Βεώρ, *φησὶν ὁ ἄνθρωπος ὁ ἀληθινῶς ὁρῶν, ἀκούων λόγια θεοῦ, ἐπιστάμενος ἐπιστήμην ὑψίστου καὶ ὅρασιν θεοῦ ἰδὼν ἐν ὕπνῳ, ἀποκεκαλυμμένοι οἱ ὀφθαλμοὶ αὐτοῦ· δείξω αὐτῷ, καὶ ῥυχὶ νῦν, μακαρίζω, καὶ οὐκ ἐγγίζει· ἀνατελεῖ ἄστρον ἐξ* 'Ιακώβ, *καὶ ἀναστήσεται ἄνθρωπος ἐξ* 'Ισραήλ, *καὶ θραύσει τοὺς ἀρχηγοὺς* Μωὰβ *καὶ προνομεύσει πάντας τοὺς υἱοὺς* Σήθ. *καὶ ἔσται* 'Εδὼμ *κληρονομία, καὶ ἔσται κληρονομία* 'Ησαῦ *ὁ ἐχθρὸς αὐτοῦ, καὶ* 'Ισραὴλ *ἐποίησεν ἐν ἰσχύϊ.* [xxiv. 15—18.]

The Hebrew words for *θεοῦ, ὑψίστου, θεοῦ,* here, are respectively אֵל, עֶלְיוֹן, שַׁדַּי. Can you remember other modes of representing these words in the LXX?

3. Give remarks on the usage in the LXX. of the words or phrases *ψυχή, ἁμαρτίαν λαμβάνειν, ἀνόμνησις, πᾶσα ἡ ἐπισκοπή, αἰνιγματισταί, πᾶν ἀναθεματισμένον, εἰς τέλος, τελέω* (*ἐτελέσθη*).

FOURTH BOOK OF MACCABEES.

1. TRANSLATE, with such notes as you may think fitting, and with illustrations from the New Testament:

(*α*) *θυμόν τις οὐ δύναται ἐκκόψαι ἡμῶν τῆς ψυχῆς, ἀλλὰ τῷ μὴ δουλωθῆναι τῷ θυμῷ δυνατὸς ὁ λογισμὸς βοηθεῖν. κακοήθειάν τις ἡμῶν οὐ δύναται ἐκκόψαι, ἀλλὰ τῷ μὴ καμφθῆναι τῇ κακοηθείᾳ δύναται ὁ λογισμὸς συμμαχῆσαι· οὐ γὰρ ἐκριζωτὴς τῶν παθῶν ὁ λογισμός ἐστιν ἀλλ' ἀνταγωνιστής.* [c. 3.]

(*β*) *καίτοι εἰ καὶ κατ' ἀλήθειαν μὴ ἦν ὁ νόμος ἡμῶν, ὡς σὺ ὑπολαμβάνεις, θεῖος, ἄλλως δὲ ἐνομίζομεν αὐτὸν εἶναι θεῖον, οὐδὲ οὕτως ἐξὸν ἦν ἡμῖν τὴν ἐπὶ τῇ εὐσεβείᾳ δόξαν ἀκυρῶσαι. μὴ μικρὰν οὖν εἶναι νομίσῃς ταύτην, εἰ μιαροφαγήσαιμεν, ἁμαρτίαν· τὸ γὰρ ἐπὶ μικροῖς καὶ μεγάλοις παρανομεῖν ἰσοδύναμον ἐστί· δι' ἑκατέρου γὰρ ὁ νόμος ὁμοίως ὑπερηφανεῖται.* [c. 5.]

(*γ*) *σὺ οἶσθα, θεέ, ὅτι παρόν μοι σώζεσθαι, βασάνοις καυστικαῖς ἀποθνήσκω διὰ τὸν νόμον. τοιγαροῦν ἵλεως γενοῦ τῷ ἔθνει σου, ἀρκεσθεὶς τῇ ἡμετέρᾳ ὑπὲρ αὐτῶν δίκῃ· καθάρσιον αὐτῶν ποίησον τὸ ἐμὸν αἷμα, καὶ ἀντὶ ψυχῶν αὐτῶν λαβὲ τὴν ἐμὴν ψυχήν.* [c. 6.]

(*δ*) *πῶς οὖν οὐκ ἔστι τούτοις τὴν τῆς εὐλογιστίας παθοκράτειαν ὁμολογεῖν, οἳ τῶν διὰ πυρὸς ἀλγηδόνων οὐκ ἐπεστράφησαν; καθάπερ γὰρ προβλῆτες λιμένων πύργοι τὰς τῶν κυμάτων ἀπειλὰς ἀνακόπτοντες γαληνὸν παρέχουσι τοῖς εἰσπλέουσι τὸν ὅρμον, οὕτως ἡ ἑπτάπυργος τῶν νεανίσκων εὐλογιστία τὸν τῆς εὐσεβείας ὀχυρώσασα λιμένα τὴν τῶν παθῶν ἐνίκησεν ἀκολασίαν.* [c. 13.]

(c) ἔμεινα δὲ χρόνον ἀκμῆς σὺν ἀνδρί· τούτου δὲ ἐνηλίκων γενομένων ἐτελεύτησεν ὁ πατήρ, μακαρίως μέν (τὸν γὰρ τῆς εὐτακτίας βίον ἐπιζήσας τὸν τῆς ἀτακτίας οὐκ ὠδυνήθη καιρόν)· ὃς ἐδίδασκεν ἡμᾶς, ἔτι ὢν σὺν ἡμῖν, τὸν νόμον καὶ τοὺς προφήτας. τὸν ἀναιρεθέντα Ἀβὲλ ὑπὸ τοῦ Κάιν ἀνεγίνωσκεν ἡμῖν, καὶ τὸν ὁλοκαυτούμενον Ἰσαάκ, τὸν ἐν φυλακῇ Ἰωσήφ. ἔλεγε δ' ἡμῖν τὸν ζηλωτὴν Φινεές, ἐδίδασκε δὲ ἡμᾶς τοὺς ἐν πυρὶ Ἀνανίαν καὶ Ἀζαρίαν καὶ Μισαήλ, ἐδόξαζε δὲ καὶ τὸν ἐν λάκκῳ λεόντων Δανιήλ, ὃν ἐμακάριζεν. ὑπεμίμνησκε δὲ ἡμᾶς τὴν Ἠσαΐου γραφὴν τὴν λέγουσαν 'κἂν διὰ πυρὸς διέλθῃς, φλὸξ οὐ κατακαύσει σε.' τὸν ὑμνογράφον ἐμελῴδει ἡμῖν Δαυίδ, λέγοντα 'πολλαὶ αἱ θλίψεις τῶν δικαίων, καὶ ἐκ πασῶν αὐτῶν ῥύσεται αὐτοὺς ὁ κύριος.' τὸν Σολομῶντα ἐπαροιμίαζεν ἡμῖν λέγοντα 'ξύλον ζωῆς ἐστὶ πᾶσι τοῖς ποιοῦσιν αὐτοῦ τὸ θέλημα.' τὸν Ἰεζεκιὴλ ἐπιστοποιεῖτο λέγοντα 'εἰ ζήσεται τὰ ὀστᾶ τὰ ξηρὰ ταῦτα;' ᾠδὴν μὲν ἣν ἐδίδαξε Μωϋσῆς οὐκ ἐπελάθετο διδάσκων, τὴν λέγουσαν 'ἐγὼ ἀποκτενῶ καὶ ζῆν ποιήσω. αὕτη ἡ ζωὴ ὑμῶν καὶ ἡ μακρότης ἡμερῶν.' [c. 18.]

2. Compare the usages of the following words and phrases in this book and in the New Testament: παρακαταθήκη, ἀφθαρσία, αἰώνιος ὄλεθρος, [ὁ δοκῶν] ἀποκτεῖναι τὸ σῶμα, [διὰ τὸν θεὸν] ἀποθανόντες ζῶσι τῷ θεῷ, ἱλαστήριον [τοῦ θανάτου αὐτῶν].

SECOND GENERAL EXAMINATION FOR THE ORDINARY B.A. DEGREE.

MONDAY, *November* 26, 1883. 9—12.

THE ACTS OF THE APOSTLES. (A)

1. GIVE a short sketch, illustrating by references to this Book, of the political position of Judaea at this period.

2. To what extent was Latin used in Judaea at this time? Give instances.

3. Give a short summary of St Paul's speech at Athens. What was its effect?

4. Translate:

(*a*) *καὶ δώσω τέρατα ἐν τῷ οὐρανῷ ἄνω καὶ σημεῖα ἐπὶ τῆς γῆς κάτω, αἷμα καὶ πῦρ καὶ ἀτμίδα καπνοῦ· ὁ ἥλιος μεταστραφήσεται εἰς σκότος καὶ ἡ σελήνη εἰς αἷμα πρὶν ἐλθεῖν ἡμέραν Κυρίου τὴν μεγάλην καὶ ἐπιφανῆ. καὶ ἔσται πᾶς ὃς ἐὰν ἐπικαλέσηται τὸ ὄνομα Κυρίου σωθήσεται.*

Whose words were these, and on what occasion were they spoken?

(*b*) *καὶ ἡμεῖς ὁμοιοπαθεῖς ἐσμὲν ὑμῖν ἄνθρωποι, εὐαγγελιζόμενοι ὑμᾶς ἀπὸ τούτων τῶν ματαίων ἐπιστρέφειν ἐπὶ θεὸν ζῶντα ὃς ἐποίησεν τὸν οὐρανὸν καὶ τὴν γῆν καὶ τὴν θάλασσαν καὶ πάντα τὰ ἐν αὐτοῖς· ὃς ἐν ταῖς παρῳχημέναις γενεαῖς εἴασεν πάντα τὰ ἔθνη πορεύεσθαι ταῖς ὁδοῖς αὐτῶν· καίτοι οὐκ ἀμάρτυρον αὐτὸν ἀφῆκεν ἀγαθουργῶν, οὐρανόθεν ὑμῖν ὑετοὺς διδοὺς καὶ καιροὺς καρποφόρους, ἐμπιπλῶν τροφῆς καὶ εὐφροσύνης τὰς καρδίας ὑμῶν.*

οὐρανόθεν. Comment on this word and on the sentence generally.

(*c*) *οἵτινες τῷ Παύλῳ ἔλεγον διὰ τοῦ πνεύματος μὴ ἐπιβαίνειν εἰς Ἱεροσόλυμα. ὅτε δὲ ἐγένετο ἐξαρτίσαι ἡμᾶς τὰς ἡμέρας, ἐξελθόντες ἐπορευόμεθα προπεμπόντων ἡμᾶς πάντων σὺν γυναιξὶ καὶ τέκνοις ἕως ἔξω τῆς πόλεως, καὶ θέντες τὰ γόνατα ἐπὶ τὸν αἰγιαλὸν προσευξάμενοι ἀπησπασάμεθα ἀλλήλους, καὶ ἐνέβημεν εἰς τὸ πλοῖον, ἐκεῖνοι δὲ ὑπέστρεψαν εἰς τὰ ἴδια.*

ἔλεγον—*Ἱεροσόλυμα.* How was this advice justified?

(*d*) *κόλπον δέ τινα κατενόουν ἔχοντα αἰγιαλὸν εἰς ὃν ἐβουλεύοντο εἰ δύναιντο ἐκσῶσαι τὸ πλοῖον. καὶ τὰς ἀγκύρας περιελόντες εἴων εἰς τὴν θάλασσαν, ἅμα ἀνέντες τὰς ζευκτηρίας τῶν πηδαλίων, καὶ ἐπάραντες τὸν ἀρτέμωνα τῇ πνεούσῃ κατεῖχον εἰς τὸν αἰγιαλόν.*

τὰς ζευκτηρίας. Explain this.

5. Translate and explain:

ἡ σκηνὴ τοῦ μαρτυρίου—σαββάτου ἔχον ὁδόν—ποταμόν, οὗ ἐνομίζομεν προσευχὴν εἶναι—ἀσύμφωνοι δὲ ὄντες πρὸς ἀλλήλους ἀπελύοντο.

MONDAY, *November* 26, 1883. 9—12.

THE ACTS OF THE APOSTLES. (B)

1. GIVE a short account, illustrating by references to this Book, of the controversy among the first Christians as to the limits of the Church.

2. What was the extent of the influence of Hellenism in Judæa at the time?

3. Give your view of the character of Gallio. Compare him with Pilate.

4. Translate:

(*a*) ἦσαν δὲ προσκαρτεροῦντες τῇ διδαχῇ τῶν ἀποστόλων καὶ τῇ κοινωνίᾳ, τῇ κλάσει τοῦ ἄρτου καὶ ταῖς προσευχαῖς. Ἐγίνετο δὲ πάσῃ ψυχῇ φόβος, πολλὰ δὲ τέρατα καὶ σημεῖα διὰ τῶν ἀποστόλων ἐγίνετο. πάντες δὲ οἱ πιστεύσαντες ἐπὶ τὸ αὐτὸ εἶχον ἅπαντα κοινά, καὶ τὰ κτήματα καὶ τὰς ὑπάρξεις ἐπίπρασκον καὶ διεμέριζον αὐτὰ πᾶσιν καθότι ἄν τις χρείαν εἶχεν.

εἶχον ἅπαντα κοινά. To what extent does this seem to have been advocated by the Apostles?

(*b*) Ἡρῴδης δὲ ἐπιζητήσας αὐτὸν καὶ μὴ εὑρὼν ἀνακρίνας τοὺς φύλακας ἐκέλευσεν ἀπαχθῆναι, καὶ κατελθὼν ἀπὸ τῆς Ἰουδαίας εἰς Καισαρίαν διέτριβεν. Ἦν δὲ θυμομαχῶν Τυρίοις καὶ Σιδωνίοις· ὁμοθυμαδὸν δὲ παρῆσαν πρὸς αὐτόν, καὶ πείσαντες Βλάστον τὸν ἐπὶ τοῦ κοιτῶνος τοῦ βασιλέως ἠτοῦντο εἰρήνην διὰ τὸ τρέφεσθαι αὐτῶν τὴν χώραν ἀπὸ τῆς βασιλικῆς.

Explain ἀπαχθῆναι and κατελθών.

(*c*) ἐγὼ οἶδα ὅτι εἰσελεύσονται μετὰ τὴν ἄφιξίν μου λύκοι βαρεῖς εἰς ὑμᾶς μὴ φειδόμενοι τοῦ ποιμνίου, καὶ ἐξ ὑμῶν ἀναστήσονται ἄνδρες λαλοῦντες διεστραμμένα τοῦ ἀποσπᾶν τοὺς μαθητὰς ὀπίσω ἑαυτῶν· διὸ γρηγορεῖτε, μνημονεύοντες ὅτι τριετίαν νύκτα καὶ ἡμέραν οὐκ ἐπαυσάμην μετὰ δακρύων νουθετῶν ἕνα ἕκαστον.

τριετίαν. At what period of his ministry?

(*d*) περιπεσόντες δὲ εἰς τόπον διθάλασσον ἐπέκειλαν τὴν ναῦν, καὶ ἡ μὲν πρῷρα ἐρείσασα ἔμεινεν ἀσάλευτος, ἡ δὲ πρύμνα ἐλύετο ὑπὸ τῆς βίας. Τῶν δὲ στρατιωτῶν βουλὴ ἐγένετο ἵνα τοὺς δεσμώτας ἀποκτείνωσιν, μή τις ἐκκολυμβήσας διαφύγῃ.

τῶν δὲ στρατιωτῶν—ἀποκτείνωσιν. How was this prevented?

5. Translate and explain: ὁ κλῆρος τῆς διακονίας—ἀστεῖος τῷ Θεῷ—χαλάσαντες ἐν σπυρίδι—ἀκοῇ ἀκούσετε, καὶ οὐ μὴ συνῆτε.

MONDAY, *November* 26, 1883. 2—5.

STATICS. (A)

1. DEFINE *force*, and prove that forces can be completely represented by straight lines.

A man is letting a barrel down an unplaned board, from the level of the ground to a wine-cellar, by means of a rope wound round the barrel. If he keep the barrel for a short time in one position upon the board, what forces will then be acting upon the barrel?

2. Explain the *principle of the transmissibility of force*, and adduce any arguments you can for believing it to be true.

3. Prove that the parallelogram of forces is true as regards the *direction* of the resultant of two *commensurable* forces.

Two forces of 5 lbs. and 6 lbs. respectively, acting at a point O, are represented by straight lines OA, OB whose lengths are 5 inches and 6 inches. If the length of the line joining A and B be 8 inches, find the magnitude of the resultant of the forces.

4. What is meant by *resolving a force?* A force acts at a point A and is represented by a straight line AB, show how to resolve this force along any two straight lines AC, AD passing through the point A and lying on opposite sides of AB.

On the opposite sides of a straight line AB two equilateral triangles ABC, ABD are described, and a force P acts along AB. Resolve this force along the directions AC and AD.

5. Define the *centre of parallel forces.*

Six parallel forces, of 1 lb., 2 lbs., 3 lbs., 4 lbs., 5 lbs., and 6 lbs., respectively, are applied at points which all lie in the same straight line, and which are distant respectively 1 inch, 2 inches, 3 inches, 4 inches, 5 inches, 6 inches from one end of the line. Find the centre of the forces.

6. Define the *moment* of a force about a given point.

Two forces act at the same point. Find the algebraic sum of their moments about a point situated in the direction of their resultant.

7. Find the centre of gravity of a uniform triangular plate.

A square board weighing 20 lbs. is made into a table by inserting four equal legs into it, one at the middle point of each side. Three equal weights are placed at three of the corners of this table as it stands upon a horizontal floor, each weight being equal to that of the board. Find the greatest weight which can be placed upon the fourth corner without overturning the table, the weight of the legs of the table not being taken into consideration.

8. How can the centre of gravity of a body be practically determined by suspending it by a string?

9. Enumerate the Mechanical Powers.

Find the ratio of the power to the weight in the case of a lever of inconsiderable weight, acted on by two parallel forces.

10. Define a pulley.

Find the condition of equilibrium for a system of pulleys, round each of which a separate string passes; the strings being all parallel, and one end of each string being attached to a beam above the system.

If in such a system there be three moveable pulleys and if their weights be 1 lb., 2 lbs., 3 lbs. respectively; find the *greatest weight* and the *least weight* which can be kept in equilibrium on this combination by a power of 7 lbs., it being understood that the moveable pulleys may be arranged in any order that is preferred.

MONDAY, *November* 26, 1883. 2—5.

STATICS. (B)

1. WHAT are the three properties of a force which have to be known in order that the force may be completely determined? Prove that a straight line can represent a force in each of these particulars.

A man is rolling a barrel up an unplaned board from the ground to a door upon a higher level. If he keeps the barrel for a short time in one position on the board, what forces will then be acting upon the barrel?

2. Enunciate any propositions with regard to forces which are usually assumed as *axioms*.

3. If the parallelogram of forces be true as regards the *direction* of the resultant of two forces acting at the same point, prove that it is also true as regards the *magnitude* of that resultant.

Two forces of 3 lbs. and 4 lbs. respectively, acting at a point O, are represented by straight lines OA, OB whose lengths are 3 inches and 4 inches. If the length of the line joining A and B be 6 inches, find the magnitude of the resultant of the forces.

4. What is meant by the *resolved part of a force* in any given direction?

A force of 10 lbs. acts along the side AB of an equilateral triangle ABC, what is the resolved part of this force along the side AC?

5. Find the resultant of any number of parallel forces whose points of application are known.

Six parallel forces, of 6 lbs., 5 lbs., 4 lbs., 3 lbs., 2 lbs., and 1 lb. respectively, are applied at points which all lie in the same straight line and which are distant respectively 1 inch, 2 inches, 3 inches, 4 inches, 5 inches, 6 inches from one end of the line. Find the magnitude and point of application of their Resultant.

6. Define the *moment* of a force about a given point.

If three forces be represented by the three sides of a triangle taken in order, prove that the *algebraic* sum of the moments of these forces is the same for every point in the plane of the triangle.

7. Find the centre of gravity of three equal weights placed at the three angular points of a triangle.

A square board $ABCD$ is made into a table by inserting three equal legs into it, one at the corner C and the others at the middle points of the sides AB, AD. A weight is placed on the table at its corner A as it stands upon a horizontal floor. Find how great this weight may be without overturning the table; the weight of the top of the table being 18 lbs., and that of the legs not being taken into consideration.

8. How can the centre of gravity of a body be practically determined by balancing the body upon a sharp edge?

9. Define a *Machine*. What is meant by the *Modulus* of a machine?

Find the ratio of the power to the weight in the case of a lever of inconsiderable weight acted on by two forces which are not parallel.

10. Find the condition of equilibrium for a system of pulleys, round each of which a separate string passes: the strings all being parallel and all being attached to the weight.

If in such a system there be one *fixed* and three *moveable* pulleys, and if the weights of the moveable pulleys be 1 lb., 2 lbs. and 3 lbs. respectively; find the *greatest weight* and the *least weight* which can be kept in equilibrium on this combination by a power of 7 lbs., it being understood that the moveable pulleys may be arranged in any order that is preferred.

TUESDAY, *November* 27, 1883. 9—12.

HYDROSTATICS. (A)

1. SHEW that the surface of a heavy inelastic fluid at rest is horizontal.

Two rectangular cisterns standing on a horizontal plane are joined at their bases by a leathern pipe resting on the plane. If one of them be 5 ft. long and 3 ft. broad, and the other 4 ft. 6 in. long and 3 ft. 4 in. broad, and water be poured into either, then, when the water is at rest, the pressures on the bases will be equal.

2. Define Specific Gravity. If 5 cubic inches of silver weigh as much as 21 cubic inches of plate glass, and the specific gravity of silver be 10·5, find that of plate glass.

A uniform rod 10 inches long floats vertically with ·9 of its surface immersed in a cylindrical vessel containing water. If alcohol S.G. ·8 be now poured on the water to the depth of 5 inches, shew that the upper surfaces of the rod and alcohol will coincide.

3. Find the conditions of equilibrium of a body floating in a fluid and wholly immersed in it.

A cubical block of wood, S.G. ·6, whose edge is one foot, floats, with two faces horizontal, down a fresh-water river and out to sea where a fall of snow takes place causing the block to sink to the same depth as in the river. If the specific gravity of sea water be 1·025 and the weight of a cubic foot of fresh water 1000 oz., shew that the weight of the snow on the block is 15 oz.

4. Describe Nicholson's hydrometer, and shew how the instrument may be employed for comparing the specific gravities of a solid and a fluid.

Shew that the apparent weight of a body when suspended in a fluid composed of equal volumes of two fluids which mix, without change of volume, is equal to the arithmetic mean between its apparent weights when suspended successively in the two fluids.

5. Shew that the pressure of the atmosphere is accurately represented by the weight of the column of mercury in the barometer.

If a body be suspended by an elastic string, explain how the length of the string will be affected by a fall in the barometer.

6. Describe the syphon, and explain its action.

If the longer branch be inserted into a closed vessel from which the air has been partially exhausted, describe the effects on the action of the instrument.

7. Describe the mercurial thermometer. Why is it important that, when the fixed points are marked, the instrument should be in the same position relative to the horizontal plane as that in which it is to be used?

A Reaumur thermometer marks 12° indoors when a Fahrenheit thermometer marks 41° in the garden; if their positions be interchanged, find how much they will fall and rise respectively.

8. State the law which connects the pressure and temperature of a gas at a constant volume.

When the roof of a cylindrical diving bell is 27 feet below the surface of the water the temperature of the air within it is 2° C., and the level of the water in the bell is 5 ft. below the roof. If now the temperature of the air in the bell be raised by 5° C., and the bell be raised until the level of the water in it be 1 ft. lower than at first, shew that the height through which the bell has been raised is 11 ft., the height of the water barometer being 34 ft.

9. Define *Latent Heat.* What is meant by saying that the Latent Heat of steam at 100° C. is 537 thermal units?

How many thermal units will be required to convert 50 lbs. of water at 50° C. into steam at 100° C.?

10. Describe the method of measuring the amount of heat which passes out of a body by means of the calorimeter of Lavoisier and Laplace.

Two chains A and B are contained in a jar which is maintained at a temperature 114° C. A consists of 9 links of iron and 11 links of copper, and B consists of 9 links of copper and 11 links of iron, and each link weighs one ounce. The chain A is taken out of the jar and placed in a vessel containing 198 oz. of water at 13° C., and causes the temperature to rise by 1° C. Had both chains been placed in the vessel, the temperature would have risen by 2° C. Shew that the specific heat of copper is ·09.

11. Explain what is meant by the term conduction of heat, and describe some method of comparing the relative conductivities for heat of different substances.

The lid of a metal urn is $\frac{1}{10}$th of an inch thick, and its area contains 100 square inches. If the inner surface of the lid be 1° C. hotter than the outer surface, find the number of therms passing through the lid in one hour, taking the specific thermal conductivity of the metal to be ·0092 at the temperature in question, the units of length and time being one inch and one second respectively.

12. Explain the formation of dew, and describe the kind of night favourable for its formation.

Why do winds as they ascend the slopes of mountains become moister?

TUESDAY, *November* 27, 1883. 9—12.

HYDROSTATICS. (B)

1. PROVE that the pressure at any point within a heavy uniform inelastic fluid, not exposed to external pressure, is proportional to the depth of that point below the surface of the fluid.

Two rectangular cisterns standing on a horizontal plane are joined at their bases by a leathern pipe resting on the plane. If one of them be 6 ft. long and 2 ft. 2 in. broad, and the other 4 ft. 4 in. long and 3 ft. broad, and water be poured into either, then, when the water is at rest, the pressures on the bases will be equal.

2. Define Specific Gravity. If 13 cubic inches of gold weigh as much as 97 cubic inches of quartz, and the specific gravity of gold be 19·4, find that of quartz.

A uniform rod 12 inches long floats vertically with ·9 of its surface immersed in a cylindrical vessel containing water. If alcohol S. G. ·8 be now poured on the water to the depth of 6 inches, shew that the upper surfaces of the rod and alcohol will coincide.

3. Find the conditions of equilibrium of a body floating and partially immersed in a fluid of uniform density.

A cubical block of wood, S. G. ·8, whose edge is one foot, floats, with two faces horizontal, down a fresh-water river and out to sea where a fall of snow takes place causing the block to sink to the same depth as in the river. If the specific gravity of sea water be 1·025 and the weight of a cubic foot of fresh water 1000 oz., shew that the weight of the snow on the block is 20 oz.

4. Describe the common hydrometer, and shew how the instrument may be employed for comparing the specific gravities of two fluids.

Shew that if the apparent weight of a body suspended in a fluid composed of volumes of two fluids which mix, without change of volume, is equal to the arithmetic mean between its apparent weights when suspended successively in the two fluids, the volumes of the two fluids are equal.

5. Describe the construction of the common barometer.

If a body be suspended by an elastic string, explain how the length of the string will be affected by a rise in the barometer.

6. Describe the condenser, and explain its action.

If the density of the air in a closed vessel be double that of atmospheric air, and the vessel be lowered into a lake, explain what will happen if a hole be made in the bottom of the vessel when its depth is (1) less than, (2) equal to, (3) greater than 34 feet, that being the height of the water barometer.

7. Shew how to graduate a mercurial thermometer. Why is it important that, when the fixed points are marked, the instrument should be in the same position relative to the vertical as that in which it is to be used?

A Reaumur thermometer marks 16° indoors when a Fahrenheit thermometer marks 50° in the garden; if their positions be interchanged, find how much they will fall and rise respectively.

8. State the law which connects the pressure and volume of a gas at a constant temperature.

When the roof of a cylindrical diving bell is a certain depth below the surface of the water the temperature of the air within it is 2° C., and the level of the water in the bell is 5 ft. below the roof of the bell. If now the temperature of the air in the bell be raised by 5° C., and if, when the bell be raised 11 ft., the level of the water in it be 1 ft. lower than at first, shew that the depth of the bell at first was 27 ft., the height of the water barometer being 34 ft.

9. Define *Latent Heat.* What is meant by saying that the Latent Heat of ice is 79 thermal units?

How many thermal units will be required to convert 70 lbs. of ice at 0° C. into water at 10° C.?

10. Shew how the specific heat of a body may be determined by means of Black's calorimeter.

Two chains A and B are contained in a jar which is maintained at a temperature 114° C. A consists of 9 links of iron and 11 links of copper, and B consists of 9 links of copper and 11 links of iron, and each link weighs one ounce. The chain A is taken out of the jar and placed in a vessel containing 198 oz. of water at 13° C., and causes the temperature to rise by 1° C. Had both chains been placed in the vessel, the temperature would have risen by 2° C. Shew that the specific heat of iron is ·11.

11. Distinguish between convection and conduction of heat, and explain what is meant by the specific thermal conductivity of a substance.

The lid of a metal urn is $\frac{1}{20}$th of an inch thick, and its area contains 100 square inches. If the inner surface of the lid be $\frac{1}{2}$° C. hotter than the outer surface, find the number of therms passing through the lid in one hour, taking the specific thermal conductivity of the metal to be ·0092 at the temperature in question, the units of length and time being one inch and one second respectively.

12. Define the dew-point, and describe the kind of night unfavourable for the formation of dew.

Why do winds as they flow down the slopes of mountains become drier?

TUESDAY, *November* 27, 1883. 2—5.

QUINTUS CURTIUS. (A)

1. WHAT was the position of the Greek states at the time of Alexander's invasion of Persia? Had he in your opinion taken sufficient precautions to secure his communications with Europe?

2. What was the state of nautical science among the contemporaries of Alexander?

3. Detail briefly the ultimate results in India and elsewhere of Alexander's conquests.

4. Translate:

(*a*) Herculis simulacrum agmini peditum praeferebatur. id maximum erat bellantibus incitamentum, et deseruisse gestantes militare flagitium habebatur. capitis etiam sanxerant poenam iis, qui ex acie non rettulissent, metu, quem ex illo hoste quondam conceperant, etiam in religionem venerationemque converso. Macedonas non beluarum modo, sed etiam ipsius regis aspectus parumper inhibuit. beluae dispositae inter armatos speciem turrium procul fecerant.

Explain *religio*.

(*b*) indomitis gentibus se obiectos, ut sanguine suo aperirent ei oceanum. trahi extra sidera et solem cogique adire, quae mortalium oculis natura subduxerit. novis identidem armis novos hostes existere. quos ut omnes fundant fugentque, quod praemium ipsos manere? caliginem ac tenebras et perpetuam noctem profundo incubantem mari, repletum inmanium beluarum gregibus fretum, immobiles undas, in quibus emoriens natura defecerit.

Explain and give other instances of the use of *sub* in composition.

(*c*) idem corporis custos promptissimusque bellator et pacis artibus quam militiae maior et clarior modico civilique cultu liberalis in primis adituque facili nihil ex fastu regiae adsumpserat. ob haec regi an popularibus carior esset, dubitari poterat, tum certe primum expertus suorum animos, adeo ut fortunam, in quam postea ascendit, in illo periculo Macedones ominati esse videantur.

Who was this? What was his subsequent history?

(*d*) ac ne levius quidem aegri sequi poterant: quippe agmen raptim agebatur tantum singulis ad spem salutis ipsos proficere credentibus, quantum itineris festinando praeciperent. igitur qui defecerant, notos ignotosque, ut adlevarentur, orabant: sed nec iumenta erant, quibus excipi possent, et miles vix arma portabat, imminentisque et ipsis facies mali ante oculos erat.

5. Translate and explain, specially noticing the words in italics:

Mori praestat, quam precario *imperatorem esse*—a Dioxippo contemptim militarem eludente ferociam accepta condicio est—longae naves—*tuo* vero *capite* ignobilem vicum emi, quis ferat?

TUESDAY, *November* 27, 1883. 2—5.

QUINTUS CURTIUS. (B)

1. IN what stage of development was the power of Rome at Alexander's death? Give reasons for any opinion you may have as to the probable result of a conflict between them.

2. Remark on the geographical knowledge—or ignorance—of the contemporaries of Alexander. Illustrate this by examples.

3. Contrast briefly the conquests of Alexander in India with those of subsequent invaders of the country.

4. Translate:

(*a*) per vos gloriamque vestram, qua humanum fastigium exceditis, perque et mea in vos et in me vestra merita, quibus invicti contendimus, oro quaesoque, ne humanarum rerum terminos adeuntem alumnum commilitonemque vestrum, ne dicam regem, deseratis. cetera vobis imperavi: hoc unum debiturus sum. et is vos rogo, qui nihil umquam vobis praecepi, quin primus me periculis obtulerim, qui saepe aciem clipeo meo texi, ne infregeritis in manibus meis palmam, qua Herculem Liberumque patrem, si invidia afuerit, aequabo.

Explain *invidia*.

(*b*) hinc in regnum Sopithis perventum est. gens, ut barbari credunt, sapientia excellet bonisque moribus regitur. genitos liberos non parentum arbitrio tollunt aluntque, sed eorum, quibus spectandi infantum habitum cura mandata est. si quos insignes aut aliqua parte membrorum inutiles notaverunt, necari iubent. nuptiis coeunt non genere ac nobilitate coniunctis, sed electa corporum specie, quia eadem aestimatur in liberis.

Explain *tollunt*.

(*c*) horret animus cogitationem rei, quam paulo ante vidimus. eloqui timeo, invicti corporis spolia inertissimas manus fuisse infecturas, nisi te interceptum misericors in nos fortuna servasset. totidem proditores, totidem desertores sumus, quot te non potuimus persequi. universos licet milites ignominia notes, nemo recusabit luere id, quod ne admitteret, praestare non potuit.

Explain the construction of *licet* and give similar instances.

(*d*) navigia quoque et lacerata refici et eversa fluctibus erigi iubet paratosque esse et intentos, cum rursus mare terras inundasset. tota ea nocte inter vigilias adhortationesque consumpta celeriter et equites ingenti cursu refugere et secutus est aestus.

5. Translate and explain, specially noticing the words in italics:

Anceps genus auxilii est et in *suos* acrius furit—Ptolemaeum qui postea regnavit—satrapes—*non expectatis*, qui simul *esse* debebant, clauda et inhabilia navigia languide moliebantur.

WEDNESDAY, *November* 28, 1883. 9—12.

HOMER, ODYSSEY. Books IX. X. (A)

1. TRANSLATE:

(α) αἱ μὲν ἔπειτ' ἐφέροντ' ἐπικάρσιαι, ἱστία δέ σφιν
τριχθά τε καὶ τετραχθὰ διέσχισεν ἰς ἀνέμοιο.
καὶ τὰ μὲν ἐς νῆας κάθεμεν, δείσαντες ὄλεθρον,
αὐτὰς δ' ἐσσυμένως προερύσσαμεν ἠπειρόνδε.
ἔνθα δύω νύκτας δύο τ' ἤματα συνεχὲς αἰεὶ
κείμεθ', ὁμοῦ καμάτῳ τε καὶ ἄλγεσι θυμὸν ἐδοντες.

(β) οἱ μὲν μοχλὸν ἑλόντες ἐλάϊνον, ὀξὺν ἐπ' ἄκρῳ,
ὀφθαλμῷ ἐνέρεισαν· ἐγὼ δ' ἐφύπερθεν ἀερθεὶς
δίνεον, ὡς ὅτε τις τρυπῷ δόρυ νήϊον ἀνὴρ
τρυπάνῳ, οἱ δέ τ' ἔνερθεν ὑποσσείουσιν ἱμάντι
ἁψάμενοι ἑκάτερθε, τὸ δὲ τρέχει ἐμμενὲς αἰεί·
ὣς τοῦ ἐν ὀφθαλμῷ πυριήκεα μοχλὸν ἑλόντες
δινέομεν, τὸν δ' αἷμα περίρρεε θερμὸν ἐόντα.

(γ) ἐξῆμαρ μὲν ὁμῶς πλέομεν νύκτας τε καὶ ἦμαρ·
ἑβδομάτῃ δ' ἱκόμεσθα Λάμου αἰπὺ πτολίεθρον,
Τηλέπυλον Λαιστρυγονίην, ὅθι ποιμένα ποιμὴν
ἠπύει εἰσελάων, ὁ δέ τ' ἐξελάων ὑπακούει.
ἔνθα κ' ἄϋπνος ἀνὴρ δοιοὺς ἐξήρατο μισθούς,
τὸν μὲν βουκολέων, τὸν δ' ἄργυφα μῆλα νομεύων·
ἐγγὺς γὰρ νυκτός τε καὶ ἤματός εἰσι κέλευθοι.

(δ) ὣς ἔφατ', αὐτίκα δὲ χρυσόθρονος ἦλυθεν Ἠώς.
ἀμφὶ δέ με χλαῖνάν τε χιτῶνά τε εἵματα ἕσσεν·
αὐτὴ δ' ἀργύφεον φᾶρος μέγα ἔννυτο νύμφη,
λεπτὸν καὶ χαρίεν, περὶ δὲ ζώνην βάλετ' ἰξυῖ
καλὴν χρυσείην, κεφαλῇ δ' ἐπέθηκε καλύπτρην.
αὐτὰρ ἐγὼ διὰ δώματ' ἰὼν ὤτρυνον ἑταίρους
μειλιχίοις ἐπέεσσι παρασταδὸν ἄνδρα ἕκαστον·
"Μηκέτι νῦν εὕδοντες ἀωτεῖτε γλυκὺν ὕπνον,
ἀλλ' ἴομεν· δὴ γάρ μοι ἐπέφραδε πότνια Κίρκη."

2. Translate, *explaining important words and constructions:*

(α) ἦμος δ' Ἠέλιος μετενίσσετο βουλυτόνδε,
καὶ τότε δὴ Κίκονες κλῖναν δαμάσαντες Ἀχαιούς.

(β) ἔνθ' ἐμὲ μὲν πρώτισθ' ἕταροι λίσσοντ' ἐπέεσσιν
τυρῶν αἰνυμένους ἰέναι πάλιν.

(γ) ὣς ἔφαθ', ἡμῖν δ' αὖτε κατεκλάσθη φίλον ἦτορ
δεισάντων φθόγγον τε βαρὺν αὐτόν τε πέλωρον.

(δ) ἔνθ' ἐπεὶ ἐς λιμένα κλυτὸν ἤλθομεν, ὃν πέρι πέτρη
ἠλίβατος τετύχηκε διαμπερὲς ἀμφοτέρωθεν.

(ε) τῇ, τόδε φάρμακον ἐσθλὸν ἔχων ἐς δώματα Κίρκης
ἔρχευ, ὅ κέν τοι κρατὸς ἀλάλκῃσιν κακὸν ἦμαρ.

3. (α) ἐλθὼν τῶνδ' ἀνδρῶν πειρήσομαι, οἵτινές εἰσιν,
ἤ ῥ' οἵγ' ὑβρισταί τε καὶ ἄγριοι οὐδὲ δίκαιοι,
ἠὲ φιλόξεινοι, καί σφιν νόος ἐστὶ θεοῦδής.

Translate and discuss these words in connexion with Homeric ideas of civilization.

(β) Explain the phrase Διὸς αἶσα.

4. What are the chief translations of Homeric poems into English verse? Criticize any with which you are acquainted.

WEDNESDAY, *November* 28, 1883. 9—12.

HOMER, ODYSSEY. BOOKS IX. X. (B)

1. TRANSLATE:

(α) αὐτὰρ ἐπὶ κρατὸς λιμένος ῥέει ἀγλαὸν ὕδωρ,
κρήνη ὑπὸ σπείους· περὶ δ' αἴγειροι πεφύασιν.
ἔνθα κατεπλέομεν, καί τις θεὸς ἡγεμόνευεν
νύκτα δι' ὀρφναίην, οὐδὲ προὐφαίνετ' ἰδέσθαι·
ἀὴρ γὰρ παρὰ νηυσὶ βαθεῖ' ἦν, οὐδὲ σελήνη
οὐρανόθεν προὔφαινε, κατείχετο δὲ νεφέεσσιν.

(β) τὸν μὲν ἐγὼ βούλευσα κατὰ μεγαλήτορα θυμὸν
ἆσσον ἰών, ξίφος ὀξὺ ἐρυσσάμενος παρὰ μηροῦ,
οὐτάμεναι πρὸς στῆθος, ὅθι φρένες ἧπαρ ἔχουσιν,
χεῖρ' ἐπιμασσάμενος· ἕτερος δέ με θυμὸς ἔρυκεν.
αὐτοῦ γὰρ κε καὶ ἄμμες ἀπωλόμεθ' αἰπὺν ὄλεθρον·
οὐ γάρ κεν δυνάμεσθα θυράων ὑψηλάων
χερσὶν ἀπώσασθαι λίθον ὄβριμον, ὃν προσέθηκεν.
ὣς τότε μὲν στενάχοντες ἐμείναμεν Ἠῶ δῖαν.

(γ) ὧδε δέ μοι φρονέοντι δοάσσατο κέρδιον εἶναι,
πρῶτ' ἐλθόντ' ἐπὶ νῆα θοὴν καὶ θῖνα θαλάσσης
δεῖπνον ἑταίροισιν δόμεναι προέμεν τε πυθέσθαι.
ἀλλ' ὅτε δὴ σχεδὸν ἦα κιὼν νεὸς ἀμφιελίσσης,
καὶ τότε τίς με θεῶν ὀλοφύρατο μοῦνον ἐόντα,
ὅς ῥά μοι ὑψίκερων ἔλαφον μέγαν εἰς ὁδὸν αὐτὴν
ἧκεν· ὁ μὲν ποταμόνδε κατήϊεν ἐκ νομοῦ ὕλης
πιόμενος· δὴ γάρ μιν ἔχεν μένος ἠελίοιο.
τὸν δ' ἐγὼ ἐκβαίνοντα κατ' ἄκνηστιν μέσα νῶτα
πλῆξα· τὸ δ' ἀντικρὺ δόρυ χάλκεον ἐξεπέρησεν,
κὰδ δ' ἔπεσ' ἐν κονίῃσι μακών, ἀπὸ δ' ἔπτατο θυμός.

(δ) πολλὰ δὲ γουνοῦσθαι νεκύων ἀμενηνὰ κάρηνα,
ἐλθὼν εἰς Ἰθάκην στεῖραν βοῦν, ἥτις ἀρίστη,
ῥέξειν ἐν μεγάροισι πυρήν τ' ἐμπλησέμεν ἐσθλῶν,
Τειρεσίῃ δ' ἀπάνευθεν ὄϊν ἱερευσέμεν οἴῳ
παμμέλαν', ὃς μήλοισι μεταπρέπει ὑμετέροισιν.

2. Translate, *explaining important words and constructions:*

(α) ὡς μή τίς μοι ἀτεμβόμενος κίοι ἴσης.

(β) ἐν δὲ λιμὴν εὔορμος, ἵν' οὐ χρεὼ πείσματός ἐστιν,
οὔτ' εὐνὰς βαλέειν οὔτε πρυμνήσι' ἀνάψαι.

(γ) ἀλλ' ἐγὼ οὐ πιθόμην—ἦ τ' ἂν πολὺ κέρδιον ἦεν—
ὄφρ' αὐτόν τε ἴδοιμι, καὶ εἴ μοι ξείνια δοίη.

(δ) δῶκέ μοι ἐκδείρας ἀσκὸν βοὸς ἐννεώροιο.

(ε) ἕς ῥ' ἀσάμινθον ἔσασα λό' ἐκ τρίποδος μεγάλοιο,
ὄφρα μοι ἐκ κάματον θυμοφθόρον εἵλετο γυίων.

3. (α) τοῖσιν δ' οὔτ' ἀγοραὶ βουληφόροι οὔτε θέμιστες,
ἀλλ' οἵγ' ὑψηλῶν ὀρέων ναίουσι κάρηνα
ἐν σπέσσι γλαφυροῖσι, θεμιστεύει δὲ ἕκαστος
παίδων ἠδ' ἀλόχων, οὐδ' ἀλλήλων ἀλέγουσιν.

Translate and discuss these words in connexion with Homeric ideas of political development.

(β) Compare the Homeric with other descriptions of the Cyclops.

4. What English poems appear to be founded on passages from these two books? Compare them with the originals.

WEDNESDAY, *November* 28, 1883. 2—5.

ALGEBRA. (A)

1. SOLVE the equations:

(1) $\frac{x-3}{9}+\frac{4x-3}{15}-\frac{7x-4}{20}=0,$

(2) $5(x-9)^2+(2x-11)^2-(3x-21)^2=5,$

(3) $7x^2+6x-1=0,$

(4) $\frac{x^3+a^3}{x+a}+\frac{x^3+b^3}{x+b}=2(x^2-ab).$

2. If α, β be roots of the equation $x^2-mx+n=0$, then

$$\alpha+\beta=m, \text{ and } \alpha\beta=n.$$

Shew also that $$\frac{\alpha^2}{\alpha^2-n}+\frac{\beta^2}{\beta^2-n}=m.$$

Form the equation whose roots are 4 and $-\frac{1}{4}$.

3. A person buys 9 oxen and 20 sheep for £230; he sells the oxen at a gain of 25 per cent. and the sheep at a loss of 20 per cent., gaining by the transaction £35. Find the price he gave for each.

4. Solve the equations:

(1) $\begin{cases}\frac{3}{x}-\frac{5}{y}=1,\\ \frac{2}{x}+\frac{3}{y}=26,\end{cases}$

(2) $\frac{a}{\sqrt{x}-b}+\frac{b}{\sqrt{x}-a}=2,$

(3) $\begin{cases}(x-3)^2+(y-3)^2=34,\\ xy-3(x+y)=6.\end{cases}$

5. A number consists of 2 digits of which that in the unit's place is the greater; the difference between their squares is equal to the number, and if they be inverted the number thus formed is 7 times their sum. Find the number.

6. A train travelling at the rate of $37\frac{1}{2}$ miles an hour passes a person walking on a road parallel to the railway in 6 seconds; it also meets another person walking at the same rate as the other, but in the opposite direction, and passes him in 4 seconds. Find the length of the train.

7. Write down the mean proportional between a and b, and find it when

$$a=3\tfrac{8}{9}, \text{ and } b=1\tfrac{1}{3}.$$

Shew that the mean proportional between $x^2-\frac{1}{z^2}$ and $z^2-\frac{1}{x^2}$ is $xz-\frac{1}{xz}$.

8. If $a:b::c:d$, then $a:c::b:d$, and

(1) $a^2+b^2:c^2+d^2::(a+b)^2:(c+d)^2,$

(2) $a^2+b^2+c^2+d^2:(a+b)^2+(c+d)^2::(a+c)^2+(b+d)^2:(a+b+c+d)^2.$

9. When is one quantity said to vary directly as another?

The amount of the collection made after a public meeting held in aid of a certain cause varies directly as the number of persons present, and inversely as the length of the speeches made. If £50 were collected after a meeting at which 400 persons were present and the speeches lasted for 2 hours, find how much would be collected at a meeting at which 630 were present and the speeches lasted for $3\frac{1}{2}$ hours.

10. Find the mth term of an arithmetic progression when the 1st term and common difference are given. If the 1st term be 3, and the 4th term 4, find the 16th.

Shew that in every arithmetic progression in which the first term is equal to the common difference, the $(m+n)^{th}$ term is equal to the sum of the mth and nth terms.

11. Find the sum of p terms of a series of quantities in geometric progression when the first term and common factor are given.

The 2nd term of a geometric progression is 21, and the 3rd term is 147, find the 1st and 5th terms.

12. Sum the following series:

(1) 8, 27, 46, ... to 100 terms,

(2) 108, 72, 48, ... to 5 terms, and to infinity,

(3) $n-\frac{1}{n}, 3n-\frac{2}{n}, 5n-\frac{3}{n}$, ... to n terms.

Shew that the sum of (3) is

$$\frac{n-1}{2}\{n^2+(n+1)^2\}.$$

WEDNESDAY, *November* 28, 1883. 2—5.

ALGEBRA. (B)

1. SOLVE the equations:

(1) $\frac{x+4}{9}+\frac{2x-7}{21}-\frac{5x-16}{18}=0,$

(2) $6(2x-7)^2+(x-13)^2-(5x-15)^2=18,$

(3) $5x^2+4x-1=0,$

(4) $\frac{c^3+x^3}{c+x}+\frac{d^3+x^3}{d+x}=2(x^2-cd).$

2. If α, β be roots of the equation $x^2-px+q=0$,

then $$\alpha+\beta=p, \text{ and } \alpha\beta=q.$$

Shew also that $$\frac{\alpha^3}{\alpha^2-q}+\frac{\beta^3}{\beta^2-q}=p.$$

Form the equation whose roots are -3 and $\frac{1}{3}$.

3. A person buys 12 oxen and 40 sheep for £340; he sells the oxen at a gain of 40 per cent. and the sheep at a loss of 10 per cent., gaining by the transaction £86. Find the price he gave for each.

4. Solve the equations:

(1) $\begin{cases}\frac{4}{x}-\frac{3}{y}=3,\\ \frac{3}{x}+\frac{2}{y}=32.\end{cases}$

(2) $\frac{c}{\sqrt{x}-d}+\frac{d}{\sqrt{x}-c}=2,$

(3) $\begin{cases}(x+5)^2+(y+5)^2=85,\\ xy+5(x+y)=17.\end{cases}$

5. A number consists of 2 digits of which that in the unit's place is the greater; the difference between their squares is equal to half the number, and if they be inverted the number thus formed is 21 times their difference. Find the number.

6. A train travelling at the rate of $52\frac{1}{2}$ miles an hour passes a person walking on a road parallel to the railway in 8 seconds; it also meets another person walking at the same rate as the other, but in the opposite direction, and passes him in 6 seconds. Find the length of the train.

7. Write down the third proportional to a and b, and find it when

$$a = 3\tfrac{3}{8}, \text{ and } b = 2\tfrac{1}{4}.$$

Shew that the third proportional to $x^2 - \frac{1}{z^2}$ and $xz - \frac{1}{xz}$ is $z^2 - \frac{1}{x^2}$.

8. If $a : b :: c : d$, then $b : a :: d : c$, and

(1) $a^2 - b^2 : c^2 - d^2 :: ab : cd$,

(2) $a^2 + b^2 + c^2 + d^2 : (a-b)^2 + (c-d)^2 :: (a+c)^2 + (b+d)^2 : (a-b+c-d)^2$.

9. When is one quantity said to vary inversely as another?

The amount of the collection made after a public meeting held in aid of a certain cause varies directly as the number of persons present, and inversely as the length of the speeches made. If £40 were collected after a meeting at which 450 persons were present and the speeches lasted for $2\frac{1}{4}$ hours, find how much would be collected at a meeting at which 600 were present and the speeches lasted for 4 hours.

10. Find the pth term of an arithmetic progression when the 1st term and common difference are given. If the 1st term be 5, and the 6th term 6, find the 21st.

Shew that in every arithmetic progression in which the first term is equal to the common difference, the $(p-q)^{\text{th}}$ term is equal to the difference between the pth and qth terms.

11. Find the sum of m terms of a series of quantities in geometric progression when the first term and common factor are given.

The 2nd term of a geometric progression is 15, and the 3rd term is 75, find the 1st and 6th terms.

12. Sum the following series:

(1) 9, 26, 43, ... to 90 terms,

(2) 250, 100, 40, ... to 5 terms, and to infinity,

(3) $p - \frac{1}{p}$, $3p - \frac{2}{p}$, $5p - \frac{3}{p}$, ... to p terms.

Shew that the sum of (3) is

$$\frac{p-1}{2}\{p^2 + (p+1)^2\}.$$

THURSDAY, *November* 29, 1883. 9—12.

SHAKESPEARE'S KING HENRY V.

1. How does Shakespeare refer to the principles of Arithmetical notation, for the purpose of excusing any defects in his representation of the events portrayed in this play?

2. Express, as nearly as possible in his own words, the sentiments which Shakespeare has put into the mouth of King Henry V. on the following subjects:

(i) As to how good may be got out of evil;
(ii) As to the discomforts attending upon royalty;
(iii) As to Kings not being bound by fashions and customs.

3. Name (in Shakespeare's words, if you can) the traits of Lord Scroop's character which called forth the words,

K. HEN. I will weep for thee;
For this revolt of thine, methinks, is like
Another fall of man.

Who were the men principally concerned in Lord Scroop's conspiracy? and what is believed to have been their object in entering upon it?

4. What accounts have been given as to the number of ships in the fleet with which Henry V. went to France?

Give Shakespeare's description of its appearance.

5. K. HEN. My ransom is this frail and worthless trunk,
My army but a weak and sickly guard.

From what causes had the English army suffered so as to be reduced to such an extent as this? With what odds of numbers had it to contend at the Battle of Agincourt?

6. Remark upon any grammatical peculiarities in the following passages:

(i) for many a thousand widows
Shall this his mock mock out of their dear husbands.

(ii) that their souls
May make a peaceful and a sweet retire.

(iii) Pass our accept and peremptory answer.

7. Comment upon the passages:

(i) It follows then the cat must stay at home:
Yet that is but a crush'd necessity,.....

(ii) He therefore sends you, meeter for your spirit,
This tun of treasure.

(iii) We never valued this poor seat of England;
And therefore, living hence, did give ourself
To barbarous license: as 'tis ever common
That men are merriest when they are from home.

(iv) Let senses rule; the word is 'Pitch and Pay:'
Trust none.

(v) As fearfully as doth a galled rock
O'erhang and jutty his confounded base.

(vi) Discuss unto me; art thou officer?
Or art thou base, common and popular?

(vii) So, if a son that is by his father sent about merchandise do sinfully miscarry upon the sea,.....

(viii) Old men forget; yet all shall be forgot,
But he'll remember with advantages
What feats he did that day.

(ix) Nay, that's right; but why wear you your leek to-day? Saint Davy's day is past.

8. Explain Shakespeare's use of the terms, morris-dance, exhibiters, galliard, roping, legerity, distressful, whiffler, kecksies, hilding, gleeking.

9. Write out one of the passages,

(i) For so work the bees,.....the lazy yawning drone.

(ii) Let me speak proudly:.....Come thou no more for ransom, gentle herald.

THURSDAY, *November* 29, 1883. 9—12.

SUBJECTS FOR ESSAYS.

WRITE a short essay on one of the following subjects:

1. The cultivation of habits of observation.

2. How far the liberty of the individual may properly be curtailed for the sake of advantage to the community.

3. The "good old times."

4.
He prayeth well who loveth well
Both man and bird and beast.
He prayeth best who loveth best
All things both great and small:
For the great God, who loveth us,
He made and loveth all.

THURSDAY, *November* 29, 1883. 2—5.

LATIN PROSE COMPOSITION.

TRANSLATE into LATIN PROSE:

At this spot, eleven miles above Rome on the left bank of the Tiber, was fought the famous battle in which the Romans were entirely routed, and a small remnant of their legions driven headlong back to the city. To the advance of the Gauls no further resistance could be made. The defence even of the walls was abandoned. The fugitives crowded into the Capitol, carrying with them only such effects as they could seize in their tumultuary flight, and almost the next day the Gauls entered Rome. The defeat, the rout, the panic were all disgraceful, but the Romans consoled themselves in after-times by the proud story they invented, that the senators seated in the Forum in their chairs of office received the invader with dignified composure, and for a moment overawed him. It was not till one of the Gauls, who impertinently stroked the white beard of the aged Papirius, was stricken to the ground with a blow of the senator's ivory-headed staff, that the barbarians gave loose to their savage nature and ruthlessly massacred the whole august assembly.

DEAN MERIVALE.

SECOND PREVIOUS EXAMINATION.

WEDNESDAY, *December* 5, 1883. 9—11½.

PALEY. (A)

1. WHAT importance does Paley, in his view of revelation, attribute to miracles? What prejudication in respect to them does he resist?

2. Give reasons from the nature of the case for supposing that Christianity at its first promulgation would be ill received by the heathen public.

3. Quote testimonies to the sufferings of the Apostles from the writings of their companions and immediate followers.

4. What arguments in support of the New Testament history arise from a consideration of *spurious* Christian writings?

5. State the propositions in which Paley summarizes the external evidence for the genuineness of the historical books of the New Testament.

6. In appreciating stories of supposed miracles what tests should be applied to the miracles themselves?

7. Describe the peculiar manner of our Saviour's moral teaching, and point out how it was adapted to his peculiar character and situation.

8. State generally the argument in support of the New Testament narratives which is based upon their incidental references to contemporary circumstances, character and manners.

Mention and comment on the names and titles of Roman rulers of Judea and of Cyprus referred to in the Acts.

9. Shew that the witness borne by the Apostles to the resurrection of Christ cannot be resolved into "enthusiasm."

10. Mention any Christian writers of the third century. Comment on the number and character of such writers as an index of the influence of the Christian Church.

11. State any circumstances which help to account for the propagation of Christianity.

WEDNESDAY, *December* 5, 1883. 9—11½.

PALEY. (B)

1. DISCUSS the force of the objection to miracles which is drawn from experience.

2. Give reasons from the nature of the case for supposing that Christianity at its first promulgation in Palestine would be ill received by the Jews.

3. Shew that the Gospels supply indirect evidence that the first preachers of Christianity underwent persecutions.

4. Shew the sufficiency of the evidence afforded by each of the four Gospels, taken singly, to the facts on which the Christian religion rests.

5. Give the substance of Paley's comments upon the style and language of the New Testament writings.

6. In appreciating the credit of any miraculous story what tests should be applied to the evidence?

7. What does Paley conceive to be the fundamental principle of morality? On what grounds does he commend our Saviour's "preference of the patient to the heroic character"?

8. Give instances of the candour of the Evangelists in recording facts which would seem to make against them.

9. Describe the gradual spread of Christianity to the time of the apostolic council at Jerusalem.

10. Shew that the learned Pagans of the first century who rejected Christianity had but an obscure and distant view of it.

11. Illustrate the statement: "Christianity is charged with many consequences for which it is not responsible."

WEDNESDAY, *December* 5, 1883. 12½—3.

EUCLID. (A)

1. DRAW a straight line at right angles to a given straight line from a given point in the same.

AB is a given straight line, *C*, *D* are two points without it. Find a point in *AB* equidistant from *C* and *D*.

In what case will every point in *AB* be equidistant from the given points?

2. If one side of a triangle be produced, the exterior angle shall be greater than either of the interior and opposite angles.

3. The opposite sides and angles of parallelograms are equal to one another.

4. Describe a parallelogram that shall be equal to a given triangle, and have one of its angles equal to a given rectilineal angle.

5. In obtuse-angled triangles, if a perpendicular be drawn from either of the acute angles to the opposite side produced, the square on the side subtending the obtuse angle is greater than the squares on the sides containing the obtuse angle, by twice the rectangle contained by the side on which, when produced, the perpendicular falls, and the straight line intercepted, without the triangle, between the perpendicular and the obtuse angle.

If *ABC* be the triangle, *AD* the perpendicular, and from *AD* produced *DF* be cut off equal to *AB*, and *DG* equal to *AC*; prove that *FC* is equal to *GB*.

6. If two circles cut one another, they shall not have the same centre.

7. If a straight line touch a circle, and from the point of contact a straight line be drawn cutting the circle, the angles which this line makes with the line touching the circle shall be equal to the angles which are in the alternate segments of the circle.

A circle is described about an equilateral triangle *ABC*, and the tangents drawn to the circle at the points *A*, *B* intersect in *D*. Prove that *ABD* is an equilateral triangle.

8. If the segments between the extremities of the base of a triangle and a point in the base produced have the same ratio which the other sides of the triangle have to one another, the straight line drawn from the vertex to the point of section shall bisect the exterior angle made by producing one of the sides through the vertex.

9. Equal parallelograms, which have one angle of the one equal to one angle of the other, have their sides about the equal angles reciprocally proportional.

WEDNESDAY, *December* 5, 1883. 12½—3.

EUCLID. (B)

1. DRAW a straight line perpendicular to a given straight line of unlimited length, from a given point without it.

AB is a given straight line, *C*, *D* are given points on opposite sides of it. Find a point *P* in *AB* such that the angles *BPC*, *BPD* may be equal.

In what case will every point in *AB* satisfy this condition?

2. Any two sides of a triangle are together greater than the third side.

3. If a side of a triangle be produced, the exterior angle is equal to the two interior and opposite angles; and the three interior angles of every triangle are equal to two right angles.

4. If the square described on one of the sides of a triangle be equal to the squares described on the other two sides of it, the angle contained by these two sides is a right angle.

5. In every triangle, the square on the side subtending an acute angle is less than the squares on the sides containing that angle by twice the rectangle contained by either of these sides and the straight line intercepted between the perpendicular let fall from the opposite angle and the acute angle.

Prove this proposition only in the case of an acute-angled triangle.

If *ABC* be the triangle, *AD* the perpendicular, and from *AD* produced *DF* be cut off equal to *AB*, and *DG* equal to *AC*; prove that *FC* is equal to *GB*.

6. If two circles touch one another internally, they shall not have the same centre.

7. If a straight line touch a circle, the straight line drawn from the centre to the point of contact shall be perpendicular to the line touching the circle.

Two circles touch one another and a straight line is drawn through the point of contact, meeting the circles again at the points *A*, *B*. Prove that the straight lines touching the circles at these points are parallel.

8. If the exterior angle of a triangle, made by producing one of its sides, be bisected by a straight line which also cuts the base produced, the segments between the dividing straight line and the extremities of the base shall have the same ratio which the other sides of the triangle have to one another.

9. Equal triangles, which have one angle of the one equal to one angle of the other, have their sides about the equal angles reciprocally proportional.

THURSDAY, *December* 6, 1883. 9—11½.

ARITHMETIC. (A)

1. MULTIPLY fifty thousand and eighty by four thousand and five; and divide £52559. 11*s*. 11½*d*. by 9007.

2. Find the L.C.M. of 18, 24, 28, 30, 56, 70; and the G.C.M. of 184851 and 256496.

3. Subtract $1\frac{1}{3}$ of $2\frac{3}{8}$ from $1\frac{4}{7}$ of $2\frac{5}{8}$, and simplify $\dfrac{23\frac{4}{9} - 9\frac{9}{10}}{31\frac{11}{12} + 14\frac{1}{7}}$ of $15\frac{9}{14}$.

4. Convert $\frac{7}{288}$ and $\frac{11}{14000}$ into decimals; and subtract $\cdot\dot{7}6923\dot{0}$ of 5*s*. 5*d*. from $\cdot 50\dot{9}\dot{0}$ of 9*s*. 2*d*.

5. If a pint of water contains 34·65 cubic inches, find the number of gallons contained by a cistern whose length is 6 ft. 5 in., breadth 3 ft. 9 in., and depth 1 ft. 8 in.

6. Find by Practice the value of 5 acres, 3 roods, 27 poles, 11 yards of land at £51. 6*s*. 8*d*. per acre.

7. A milkman gains £438 per annum by selling milk at 4*d*. per quart, his rate of profit being 60 per cent. How many gallons does he sell daily?

8. Find the amount of £1302. 1*s*. 8*d*. in 3 years at 6 per cent. compound interest.

If £100 amounts to £127 in 5 years at compound interest, what would £2000 amount to in 10 years at the same rate?

9. £4000 3 per cent. Consols at $100\frac{7}{8}$ are transferred into a 4 per cent. Railway debenture stock at $110\frac{7}{8}$, the expenses of the operation amounting to £43. 10*s*. Find the alteration in the income produced.

10. The net income for a certain half-year of a railway company, whose ordinary capital is £15,280,000, shows a decrease of £85,950 on that of the corresponding half of the previous year, when a dividend at the rate of 7 per cent. per annum was declared. What will be the rate of dividend for this half-year?

THURSDAY, *December* 6, 1883. 9—11½.

ARITHMETIC. (B)

1. MULTIPLY sixty thousand and fifty by eight thousand and four; and divide £49849. 19*s.* 8½*d.* by 5009.

2. Find the L.C.M. of 12, 15, 22, 40, 55, 72; and the G.C.M. of 215441 and 860343.

3. Subtract $1\frac{1}{4}$ of $3\frac{5}{7}$ from $1\frac{1}{7}$ of $4\frac{11}{12}$, and simplify $\frac{38\frac{11}{12}-6\frac{4}{5}}{14\frac{9}{11}+9\frac{7}{8}}$ of $12\frac{1}{22}$.

4. Convert $\frac{9}{128}$ and $\frac{7}{15000}$ into decimals; and subtract $\cdot\dot{8}5714\dot{2}$ of 6*s.* 5*d.* from $\cdot 40\dot{6}\dot{0}$ of 13*s.* 9*d.*

5. If a pint of water contains 34·65 cubic inches, find the number of gallons contained by a cistern whose length is 5 ft. 3 in., breadth 4 ft. 7 in., and depth 2 ft. 6 in.

6. Find by Practice the value of 7 acres, 1 rood, 31 poles, 22 yards of land at £36. 13*s.* 4*d.* per acre.

7. A milkman gains £292 per annum by selling 42 gallons of milk daily at 4*d.* per quart. What is his rate of profit per cent.?

8. Find the compound interest on £2083. 6*s.* 8*d.* for 3 years at 3 per cent. per annum.

If £100 amounts to £135 in 10 years at compound interest, what would £5000 amount to in 20 years at the same rate?

9. £3000 3 per cent. Consols at 101¼ are transferred into a 4½ per cent. Railway debenture stock at 125¼, the expenses of the operation amounting to £31. 10*s.* Find the alteration in the income produced.

10. The net income for a certain half-year of a railway company, whose ordinary capital is £29,480,000, shows an increase of £92,125 over that in the corresponding half of the previous year, when a dividend at the rate of 5¾ per cent. per annum was declared. What will be the rate of dividend for this half-year?

THURSDAY, *December* 6, 1883. 1—3½.

ELEMENTARY ALGEBRA. (A)

1. FROM the sum of

$$3(a+b)x+2(a-b)y,\ -5(2a-b)y+4(a+2b)x, \text{ and } 3ax-2(2b-a)y,$$

take

$$(9a+10b)x-(4a-b)y.$$

2. Find the coefficient of x in the continued product of $ax-m$, $bx+n$, $cx-p$.

3. Divide $x^4-3ax^3+(2a^2-ab-b^2)x^2+3a^2bx+a^2b^2$ by $x^2-(2a-b)x-ab$.

4. Resolve into elementary factors each of the following expressions:

$$x^2-2x-48;\ x^2y^4-xy^2;\ a^3-x^3;\ (a-b+c)^2-(a-c)^2;\ x^3-8x^2y+16xy^2.$$

5. Find the H. C. F. of

$$x^4-8x^3+21x^2-26x+8, \text{ and } x^4-11x^3+29x^2+3x-6.$$

6. Solve the equations:

(1) $2(1-3x)-3(2-4x)-4(3-5x)=5(6x-4)$.

(2) $\frac{1}{3}(x+1)-\frac{2}{5}(2x-3)=\frac{3}{4}(3x-2)-\frac{47}{6}$.

(3) $\left.\begin{array}{l}\frac{1}{3}(x+2y)-\frac{1}{2}(3x+4y)=\frac{1}{5}(2x+3y)-\frac{7}{2}\\ 7x-(6y+1)=0\end{array}\right\}$.

7. Find the square of $\dfrac{ax}{by}-1+\dfrac{by}{ax}$.

Prove your work by extracting the square root of the result.

8. Simplify

(1) $\dfrac{x-1}{x-2}-\dfrac{x-3}{x-4}+\dfrac{2}{(x-4)^2}$.

(2) $\dfrac{(a+x)^2}{a^2+x^2}\times\dfrac{a^4-x^4}{2a^2x+2ax^2}\times\dfrac{4a^2}{a^3+3a^2x+3ax^2+x^3}$.

9. Solve the equations:

(1) $\dfrac{3x-2}{2x-3}-\dfrac{2x-3}{3x-4}=\dfrac{11}{8}$.

(2) $\left.\begin{array}{l}3x^2-2xy+4y^2=36\\ 4x^2-y^2\quad\ =7\end{array}\right\}$.

10. What is the triplicate ratio of $a:b$?

If $4a-b:4a+b::1:2$, find the value of the ratio $7a+3b:7a-3b$.

11. When is one quantity said to vary inversely as another?

If y^2 varies as a fraction whose numerator is the sum of the squares of two quantities u and v, and denominator the product of these two quantities; and if when $u=3$ and $v=4$, $y=\frac{5}{12}\sqrt{6}$, find the value of y when $u=2$ and $v=6$.

THURSDAY, *December* 6, 1883. 1—3½.

ELEMENTARY ALGEBRA. (B)

1. FROM the sum of

$$2(a-b)x-3(a-2b)y,\ -3(2a-b)y+2(a+3b)x, \text{ and } 2(2a-3b)y-2ax,$$

take

$$(a+3b)x-2(3a-b)y.$$

2. Find the coefficient of x^2 in the continued product of $a+mx$, $b-nx$, $c-px$.

3. Divide $x^4+3ax^3+(2a^2-ab-b^2)x^2-3a^2bx+a^2b^2$ by $x^2+(a+b)x-ab$.

4. Resolve into elementary factors each of the following expressions:

$$x^2-3x-28;\ a^2x^4-ab^2;\ a^3+x^3;\ (a+b-c)^2-(a-c)^2;\ x^3y+6x^2y^2+9xy^3.$$

5. Find the H. C. F. of

$$x^4-8x^3+21x^2-26x+8 \text{ and } x^4-9x^3+19x^2-15x-12.$$

6. Solve the equations:

(1) $3(2x-1)-4(3x-2)-5(4x-3)+58=0.$

(2) $\frac{1}{2}(x+1)-\frac{3}{4}(2x-5)=\frac{2}{5}(3x-4)-\frac{3}{4}.$

(3) $\left.\begin{array}{l}\frac{1}{2}(x+3y)-\frac{1}{3}(2x+4y)=\frac{1}{4}(3x+5y)-\frac{35}{12}\\ 5x-2(3y+2)=0.\end{array}\right\}.$

7. Find the square of $1-\dfrac{ax}{by}-\dfrac{by}{ax}$.

Prove your work by extracting the square root of the result.

8. Simplify:

(1) $\dfrac{x-2}{x-1}-\dfrac{x-4}{x-3}-\dfrac{2}{(x-1)^2}.$

(2) $\dfrac{a^3+3a^2x+3ax^2+x^3}{a^2+x^2}\times\dfrac{2a^2x+2x^3}{x^2(a^2-x^2)}\times\dfrac{3a^2x-3a^2x^2}{a+x}.$

9. Solve the equations:

(1) $\dfrac{3x-2}{2x-5}-\dfrac{2x-3}{3x-2}=\dfrac{2}{3}.$

(2) $\left.\begin{array}{r}2x^2-2xy+3y^2=18\\ 3x^2-2y^2=19\end{array}\right\}.$

10. What is the duplicate ratio of $a:b$?

If $3a+b:3a-b::7:3$, find the value of the ratio $5a+2b:5a-2b$.

11. When is one quantity said to vary inversely as another?

If y^2 varies as a fraction whose numerator is the sum of the squares of two quantities u and v, and denominator the sum of these quantities; and if when $u=1$ and $v=3$, $y=\frac{1}{2}\sqrt{5}$, find the value of y when $u=3$, and $v=5$.

FRIDAY, *December* 7, 1883. 9—11½.

ADDITIONAL ALGEBRA. (A)

1. FIND the sum of m terms of an Arithmetical Progression whose first term is x and second y.

2. Sum the following series:

(1) $1\frac{2}{3}+1\frac{1}{2}+1\frac{1}{3}$ ..... to 12 terms.

(2) $1\frac{2}{3}+1\frac{1}{2}+1\frac{7}{20}$ ..... to infinity.

(3) $4-2+1-$ ..... to 10 terms.

3. The sum of the second and fourth terms of a Geometrical Progression is 20, and the difference of the first and fifth terms is 30: find the series.

4. There are three numbers in the ratio of $1:4:8$ such that if they be increased by 4, 1, 4 respectively the square roots of the sums are in Arithmetical Progression: find them.

5. A number is equal to the product of two factors: if one of these factors be diminished by 1 and the other increased by 2, the product is increased by 1: prove that if the factors be again diminished by 1 and increased by 2 respectively, the product will be less by 2 than the original number.

6. The time required to walk from A to B at a uniform rate of $3\frac{1}{3}$ miles an hour is 4 minutes less than that required to walk half the distance at 3 miles an hour and the other half at $3\frac{2}{3}$ miles an hour: what is the distance?

7. Divide 16 into two parts whose product may be 6 times their difference.

8. Define a logarithm. What is the characteristic of a logarithm? Shew that the characteristic of the logarithm of any number to base 10 may be known by inspection.

What are the characteristics of the logarithm of $\left(\frac{3^3 . 5^4}{7^2 . 2^3}\right)$ to the bases 10 and 5 respectively?

9. Prove that $\log_m\left(\frac{a}{b}\right)=\log_m a-\log_m b$.

Given $\log_{10}5=\cdot6989700$, $\log_{10}3=\cdot4771213$, find $\log_{10}\cdot032$, $\log_{10}\cdot36$, $\log_{10}720$, $\log_{10}72\cdot9$.

10. Given $\log 11111=4\cdot0457531$,

$\log 11112=4\cdot0457922$,

find $\log 11\cdot1112$ and the number whose logarithm is $2\cdot0457777$.

FRIDAY, *December* 7, 1883. 9—11½.

ADDITIONAL ALGEBRA. (B)

1. FIND the sum of m terms of a Geometrical Progression whose first term is x and second y.

2. Sum the following series:

(1) $1\frac{1}{2}+1\frac{1}{3}+1\frac{1}{6}+\ldots$ to 12 terms.

(2) $1\frac{1}{2}+1\frac{1}{3}+1\frac{5}{27}+\ldots$ to infinity.

(3) $4-2-8\ldots$ to 20 terms.

3. The sum of the second and eighth terms of an Arithmetical Progression is 22, and the sum of the third and sixth terms is 20: find the series.

4. There are three numbers in the ratio of 3 : 6 : 10 such that if each be increased by 1 the square roots of the sums are in Arithmetical Progression: find them.

5. A number is equal to the product of two factors; if one of these factors be increased by 1 and the other diminished by 2 the product is increased by 1: prove that if the factors be again increased by 1 and diminished by 2 respectively, the product will be less by 2 than the original number.

6. The time required to walk from A to B at a uniform rate of $3\frac{1}{2}$ miles an hour is 5 minutes less than that required to walk half the distance at 3 miles an hour and the other half at 4 miles an hour: what is the distance?

7. Divide 18 into two parts whose product may be 12 times their difference.

8. Define a logarithm. What is the mantissa of a logarithm? Shew that the mantissa of the logarithm of a number to base 10 is not altered by moving the decimal point in the number.

What is the logarithm of $\frac{1}{27}$ to base $3^{\frac{3}{2}}$, and of ·3125 to base $\sqrt{2}$?

9. Prove that $\log_m(ab)=\log_m a+\log_m b$.

Given $\log_{10}2=\cdot3010300$, $\log_{10}3=\cdot4771213$, find $\log_{10}\cdot072$, $\log_{10}\cdot75$, $\log_{10}7\cdot29$, $\log_{10}\cdot00125$.

10. Given

$$\log 12345=4\cdot0914911,$$
$$\log 12346=4\cdot0915263,$$

find $\log 123\cdot456$ and the number whose logarithm is $1\cdot0914999$.

FRIDAY, *December* 7, 1883. 12½—3.

TRIGONOMETRY. (A)

1. DEFINE the cosecant and tangent of an angle.

Shew that $\operatorname{cosec}^2 A = 1 + \cot^2 A$.

Find all the trigonometrical ratios of 30°.

2. A man wishes to measure the distance between two points A and B between which lies an obstacle. He therefore walks from A to C in a direction at right angles to AB a distance of 50 yards. He now finds that he can walk directly from C to B and that CB makes an angle of 60° with AC. Find the distance from A to B.

3. Prove that $\sin(90^\circ + A) = \cos A$.

4. Find a formula for all angles having the same tangent as α.

Solve completely the equation $\tan^2\theta = 1$.

5. Shew that $\sin(x+y) = \sin x \cos y + \cos x \sin y$.

Prove that

$$\sin(\alpha-\beta)\cos 2\beta + \cos(\alpha-\beta)\sin 2\beta = \sin(\beta-\alpha)\cos 2\alpha + \cos(\beta-\alpha)\sin 2\alpha.$$

If $\sin x = \frac{3}{5}$, $\cos y = \frac{8}{17}$, find $\sin(x+y)$.

6. Prove that

(1) $\sin \frac{1}{2}A = \pm\sqrt{\dfrac{1-\cos A}{2}}$.

(2) $\cos 3A = 4\cos^3 A - 3\cos A$.

(3) $\cos 4A = \cos^4 A + \sin^4 A - 6\sin^2 A\cos^2 A$.

Determine the sign of the radical in (1) when A lies between 360° and 720°.

7. If a, b, c be the sides of a triangle ABC shew that

$$a^2 = b^2 + c^2 - 2bc\cos A.$$

If ABC be an equilateral triangle each of whose sides is eight inches, and in BC a point P be taken three inches from B, shew that AP is seven inches.

8. In any triangle ABC shew that

$$\sin\frac{A}{2} = \sqrt{\frac{(s-b)(s-c)}{bc}}, \qquad \tan\frac{A}{2} = \sqrt{\frac{(s-b)(s-c)}{s(s-a)}}.$$

Find all the angles of a triangle whose sides are 13 ft., 14 ft., and 15 ft. in length having given $\log 2 = \cdot 30103$, $\log 3 = \cdot 4771213$, $\log 7 = \cdot 8450980$ and

$L\tan 26^\circ 33' = 9\cdot 6986847$, tabular difference for $1' = 3159$,

$L\tan 29^\circ 44' = 9\cdot 7567587$, tabular difference for $1' = 2933$,

$L\tan 33^\circ 41' = 9\cdot 8237981$, tabular difference for $1' = 2738$.

9. A base line 400 feet in length is measured from the foot of a vertical tower and at the end of this line the angular elevation of the top of the tower is observed to be 26° 33′ 54″; shew that the height of the tower is very nearly 200 feet.

Refer to question 8 *for the necessary logarithms.*

FRIDAY, *December* 7, 1883. $12\frac{1}{2}$—3.

TRIGONOMETRY. (B)

1. DEFINE the secant and cotangent of an angle. Shew that $\sec^2 A = 1 + \tan^2 A$. Find all the trigonometrical ratios of $60°$.

2. A man wishes to measure the distance between two points A and B between which lies an obstacle. He walks from A in a direction making an angle of $30°$ with AB to a point C distant from A by 100 yards. He now finds that he can walk directly from C to B and that CB makes an angle of $60°$ with AC. Find the distance from A to B.

3. Prove that $$\cos(90° + A) = -\sin A.$$

4. Find a formula for all angles having the same cosine as α.
Solve completely the equation $\cos^2\theta = \frac{1}{2}$.

5. Shew that $\cos(x+y) = \cos x \cos y - \sin x \sin y$.
Prove that
$$\cos(\alpha-\beta)\cos 2\beta - \sin(\alpha-\beta)\sin 2\beta = \cos(\beta-\alpha)\cos 2\alpha - \sin(\beta-\alpha)\sin 2\alpha.$$
If $\cos x = \frac{4}{5}$, $\sin y = \frac{8}{17}$, find $\cos(x+y)$.

6. Prove that
(1) $\cos\frac{1}{2}A = \pm\sqrt{\dfrac{1+\cos A}{2}}$.
(2) $\sin 3A = 3\sin A - 4\sin^3 A$.
(3) $\sin 4A = 4\sin A\cos^3 A - 4\sin^3 A\cos A$.
Determine the sign of the radical in (1) when A lies between $180°$ and $540°$.

7. Prove that in any triangle ABC
$$\cos C = \frac{a^2+b^2-c^2}{2ab}.$$
If ABC be an equilateral triangle each of whose sides is 16 inches long and in AB a point P be taken 10 inches from A, shew that CP is 14 inches.

8. Prove that in any triangle
$$\cos\frac{A}{2} = \sqrt{\frac{s(s-a)}{bc}}, \qquad \tan\frac{A}{2} = \sqrt{\frac{(s-b)(s-c)}{s(s-a)}}.$$
Find all the angles of a triangle whose sides are 30 ft., 26 ft. and 28 ft. in length having given $\log 4 = \cdot 60206$, $\log 3 = \cdot 4771213$, $\log 7 = \cdot 8450980$, and
$L\tan 26° 33' = 9\cdot 6986847$, tabular difference for $1' = 3159$,
$L\tan 29° 44' = 9\cdot 7567587$, tabular difference for $1' = 2933$,
$L\tan 33° 41' = 9\cdot 8237981$, tabular difference for $1' = 2738$.

9. A base line 300 feet in length is measured from the foot of a vertical tower and at the end of this line the angular elevation of the top of the tower is observed to be $33° 41' 24''$; shew that the height of the tower is very nearly 200 feet.

Refer to question 8 *for the necessary logarithms.*

SATURDAY, *December* 8, 1883. 9—11½.

STATICS. (A)

1. WHAT is meant by the line of action of a force?

Shew that forces may be represented by straight lines.

2. Enunciate the proposition known as the Parallelogram of forces. Assuming its truth for the direction of the resultant of any two commensurable forces prove it for the direction of the resultant of any two incommensurable forces.

Forces of 5 lbs., 6 lbs. and 7 lbs. acting at a point are in equilibrium. Find the cosines of the angles between them.

3. Define the resultant of two or more forces.

Forces P, Q, R, S acting at a point O are represented in *direction* by the sides AB, BC, CD, DA of a square taken in order. Find the magnitude of their resultant.

4. Find the resultant of two parallel forces acting towards the same parts.

A uniform rod AB whose weight is 8 lbs. and length 20 inches is suspended in a horizontal position by two vertical strings attached to the points B and C, C being distant 4 inches from A. Find the greatest weight which can be attached to the extremity A without disturbing the equilibrium of the rod.

5. Shew that the centre of gravity of a triangle lies at the point of intersection of the straight lines drawn from each of the angular points to bisect the opposite side.

The sides AB, AC of a triangle ABC right-angled at A are respectively 18 and 12 inches in length. Find the distance of its centre of gravity from C.

6. Find the centre of gravity of a number of particles lying in a straight line.

7. Define the moment of a force about a point and shew how it may be represented geometrically.

The sides AB, BC of a rectangle $ABCD$ are respectively 3 and 4 feet in length and forces of 6, 8, and 10 pounds act along AB, BC, and the diagonal CA respectively. Find the algebraical sum of their moments about A and D respectively.

8. Find the condition of equilibrium in the system of pulleys in which the strings are all parallel and attached to the weight.

Find the power required to support a weight of 11 lbs. when there are four pulleys each weighing one ounce.

9. Find the pressure on a smooth inclined plane when a weight W is supported on it by a power acting in a given direction.

If the pressure on the plane be an arithmetic mean between the weight and power and the inclination of the power to the horizon be double that of the plane, the sine of the angle of inclination of the power to the horizon will be $\frac{3}{4}$.

SATURDAY, *December* 8, 1883. 9—11½.

STATICS. (B)

1. WHEN are forces said to be commensurable?

Determine whether the following sets of forces are commensurable:

(α) $\sqrt{12}$ lbs. and $\sqrt{27}$ lbs.

(β) $7\frac{1}{3}$ lbs. and $8\frac{1}{7}$ lbs.

(γ) $3\sqrt{7}$ lbs. and $7\sqrt{3}$ lbs.

Give the reasons for your answer in each case.

2. Enunciate the proposition called the Parallelogram of forces. Assuming its truth for the direction of the resultant of any two forces prove it for the magnitude of the resultant.

Two forces of 3 lbs. and 4 lbs. respectively act at an angle of 60°. Find the magnitude of their resultant and the sines of the angles it makes with the component forces.

3. What is meant by the term *component forces*?

Forces P, Q, R act at a point represented in direction by the sides AB, BC, CA respectively, of an equilateral triangle. Find the magnitude of their resultant.

4. Find the resultant of two parallel forces acting towards opposite parts.

A weightless rod AB one foot in length is kept in a horizontal position by a vertical string CD attached to a point C in the rod distant 4 inches from A and by two vertical strings attached to the extremities A and B and to weights of 5 lbs. and 3 lbs. respectively which rest on a horizontal plane. Find the greatest force which can be applied along the string CD without disturbing the equilibrium of the rod.

5. Assuming that the centre of gravity of a triangle lies on the line joining any one of the angular points with the middle point of the opposite side shew that it divides that line in the ratio 2 : 1.

In a quadrilateral $ABCD$ the sides AB, AD are each 15 inches, and BC, CD each 20 inches in length. If $BD = 24$ inches, find the distance of the centre of gravity of the quadrilateral from A and C.

6. Find the centre of gravity of the perimeter of a triangle.

7. Define the moment of a force about a point and shew how it may be represented geometrically.

The sides of a triangle are 9, 12 and 15 feet in length, and a force P acts along each of its sides. Find the moments of the forces about each of the angular points.

8. Find the condition of equilibrium in the system of pulleys in which each pulley hangs by a separate string and the strings are all parallel.

Find the power required to support a weight of 10 lbs. when there are four pulleys each weighing one ounce.

9. Find the relation between the power and weight on a smooth inclined plane, the power acting in any given direction.

A rope inclined to the vertical at an angle of 30° is just strong enough to support a weight of 180 lbs. on a smooth plane whose inclination to the horizon is 30°. Find approximately the greatest weight it would support if hanging vertically.

MONDAY, *December* 10, 1883. 9—11½.

ST MATTHEW. (A)

1. TRANSLATE:

Τελευτήσαντος δὲ τοῦ Ἡρώδου, ἰδοὺ ἄγγελος Κυρίου κατ' ὄναρ φαίνεται τῷ Ἰωσὴφ ἐν Αἰγύπτῳ, λέγων, Ἐγερθεὶς παράλαβε τὸ παιδίον καὶ τὴν μητέρα αὐτοῦ, καὶ πορεύου εἰς γῆν Ἰσραήλ· τεθνήκασι γὰρ οἱ ζητοῦντες τὴν ψυχὴν τοῦ παιδίου. Ὁ δὲ ἐγερθεὶς παρέλαβε τὸ παιδίον καὶ τὴν μητέρα αὐτοῦ, καὶ ἦλθεν εἰς γῆν Ἰσραήλ. Ἀκούσας δὲ ὅτι Ἀρχέλαος βασιλεύει ἐπὶ τῆς Ἰουδαίας ἀντὶ Ἡρώδου τοῦ πατρὸς αὐτοῦ, ἐφοβήθη ἐκεῖ ἀπελθεῖν· χρηματισθεὶς δὲ κατ' ὄναρ, ἀνεχώρησεν εἰς τὰ μέρη τῆς Γαλιλαίας· καὶ ἐλθὼν κατῴκησεν εἰς πόλιν λεγομένην Ναζαρέτ· ὅπως πληρωθῇ τὸ ῥηθὲν διὰ τῶν προφητῶν, Ὅτι Ναζωραῖος κληθήσεται.

Give a short account of the Herod family.

Comment on Ναζωραῖος κληθήσεται.

2. Καὶ ἐμβὰς εἰς τὸ πλοῖον διεπέρασε, καὶ ἦλθεν εἰς τὴν ἰδίαν πόλιν. Καὶ ἰδοὺ προσέφερον αὐτῷ παραλυτικὸν ἐπὶ κλίνης βεβλημένον· καὶ ἰδὼν ὁ Ἰησοῦς τὴν πίστιν αὐτῶν εἶπε τῷ παραλυτικῷ, Θάρσει τέκνον, ἀφέωνταί σοι αἱ ἁμαρτίαι σου. Καὶ ἰδοὺ τινὲς τῶν γραμματέων εἶπον ἐν ἑαυτοῖς, Οὗτος βλασφημεῖ. Καὶ ἰδὼν ὁ Ἰησοῦς τὰς ἐνθυμήσεις αὐτῶν εἶπεν, Ἱνατί ὑμεῖς ἐνθυμεῖσθε πονηρὰ ἐν ταῖς καρδίαις ὑμῶν; Τί γάρ ἐστιν εὐκοπώτερον, εἰπεῖν, Ἀφέωνται σοι αἱ ἁμαρτίαι· ἢ εἰπεῖν, Ἔγειραι καὶ περιπάτει;

Explain τὴν ἰδίαν πόλιν, γραμματέων, βλασφημεῖ.

Parse βεβλημένον, ἀφέωνται, δόντα.

3. Ὁ δὲ Πέτρος ἔξω ἐκάθητο ἐν τῇ αὐλῇ, καὶ προσῆλθεν αὐτῷ μία παιδίσκη, λέγουσα, Καὶ σὺ ἦσθα μετὰ Ἰησοῦ τοῦ Γαλιλαίου. Ὁ δὲ ἠρνήσατο ἔμπροσθεν πάντων, λέγων, Οὐκ οἶδα τί λέγεις. Ἐξελθόντα δὲ αὐτὸν εἰς τὸν πυλῶνα, εἶδεν αὐτὸν ἄλλη, καὶ λέγει τοῖς ἐκεῖ, Καὶ οὗτος ἦν μετὰ Ἰησοῦ τοῦ Ναζωραίου. Καὶ πάλιν ἠρνήσατο μεθ' ὅρκου, Ὅτι οὐκ οἶδα τὸν ἄνθρωπον. Μετὰ μικρὸν δὲ προσελθόντες οἱ ἑστῶτες εἶπον τῷ Πέτρῳ, Ἀληθῶς καὶ σὺ ἐξ αὐτῶν εἶ· καὶ γὰρ ἡ λαλιά σου δῆλόν σε ποιεῖ.

In what other Gospels is this recorded, and with what difference?

4. Translate and explain:

(α) τὸν ἄρτον ἡμῶν τὸν ἐπιούσιον δὸς ἡμῖν σήμερον.

(β) ὅτε δὲ ἐβλάστησεν ὁ χόρτος καὶ καρπὸν ἐποίησεν, τότε ἐφάνη καὶ τὰ ζιζάνια.

(γ) καὶ τὰς τραπέζας τῶν κολλυβιστῶν κατέστρεψεν.

(δ) μὴ κτήσησθε χαλκὸν εἰς τὰς ζώνας ὑμῶν.

5. Explain ὑποκριτής, Βεελζεβούλ, Μαμωνᾶς, μίλιον, τελώνης.

MONDAY, *December* 10, 1883. 9—11½.

ST MATTHEW. (B)

1. TRANSLATE:

Τότε παραγίνεται ὁ Ἰησοῦς ἀπὸ τῆς Γαλιλαίας ἐπὶ τὸν Ἰορδάνην πρὸς τὸν Ἰωάννην, τοῦ βαπτισθῆναι ὑπ' αὐτοῦ. Ὁ δὲ Ἰωάννης διεκώλυεν αὐτὸν, λέγων, Ἐγὼ χρείαν ἔχω ὑπὸ σοῦ βαπτισθῆναι, καὶ σὺ ἔρχῃ πρός με; Ἀποκριθεὶς δὲ ὁ Ἰησοῦς εἶπε πρὸς αὐτὸν, Ἄφες ἄρτι· οὕτω γὰρ πρέπον ἐστὶν ἡμῖν πληρῶσαι πᾶσαν δικαιοσύνην. τότε ἀφίησιν αὐτόν. Καὶ βαπτισθεὶς ὁ Ἰησοῦς ἀνέβη εὐθὺς ἀπὸ τοῦ ὕδατος, καὶ ἰδοὺ ἀνεῴχθησαν αὐτῷ οἱ οὐρανοὶ, καὶ εἶδε τὸ Πνεῦμα τοῦ Θεοῦ καταβαῖνον ὡσεὶ περιστερὰν, καὶ ἐρχόμενον ἐπ' αὐτόν· καὶ ἰδοὺ φωνὴ ἐκ τῶν οὐρανῶν λέγουσα, Οὗτός ἐστιν ὁ υἱός μου ὁ ἀγαπητὸς, ἐν ᾧ εὐδόκησα.

With what other event in our Lord's life may this be compared? Comment on πληρῶσαι πᾶσαν δικαιοσύνην.

2. Ὁ δὲ Ἰωάννης ἀκούσας ἐν τῷ δεσμωτηρίῳ τὰ ἔργα τοῦ Χριστοῦ, πέμψας δύο τῶν μαθητῶν αὐτοῦ, εἶπεν αὐτῷ, Σὺ εἶ ὁ ἐρχόμενος, ἢ ἕτερον προσδοκῶμεν; Καὶ ἀποκριθεὶς ὁ Ἰησοῦς εἶπεν αὐτοῖς, Πορευθέντες ἀπαγγείλατε Ἰωάννῃ, ἃ ἀκούετε καὶ βλέπετε· τυφλοὶ ἀναβλέπουσι, καὶ χωλοὶ περιπατοῦσι· λεπροὶ καθαρίζονται, καὶ κωφοὶ ἀκούουσι· νεκροὶ ἐγείρονται, καὶ πτωχοὶ εὐαγγελίζονται. Καὶ μακάριός ἐστιν ὃς ἐὰν μὴ σκανδαλισθῇ ἐν ἐμοί.

Explain ἐν τῷ δεσμωτηρίῳ, ὁ ἐρχόμενος, νεκροὶ ἐγείρονται.

Parse πέμψας—ἀποκριθείς—σκανδαλισθῇ.

3. Κατὰ δὲ ἑορτὴν εἰώθει ὁ ἡγεμὼν ἀπολύειν ἕνα τῷ ὄχλῳ δέσμιον, ὃν ἤθελον. Εἶχον δὲ τότε δέσμιον ἐπίσημον, λεγόμενον Βαραββᾶν. Συνηγμένων οὖν αὐτῶν, εἶπεν αὐτοῖς ὁ Πιλᾶτος, Τίνα θέλετε ἀπολύσω ὑμῖν; Βαραββᾶν, ἢ Ἰησοῦν τὸν λεγόμενον Χριστόν; ᾔδει γὰρ ὅτι διὰ φθόνον παρέδωκαν αὐτόν. Καθημένου δὲ αὐτοῦ ἐπὶ τοῦ βήματος, ἀπέστειλε πρὸς αὐτὸν ἡ γυνὴ αὐτοῦ λέγουσα, Μηδὲν σοὶ καὶ τῷ δικαίῳ ἐκείνῳ· πολλὰ γὰρ ἔπαθον σήμερον κατ' ὄναρ δι' αὐτόν.

In what other Gospels is this recorded, and with what difference?

4. Translate and explain:

(α) καὶ μὴ εἰσενέγκῃς ἡμᾶς εἰς πειρασμόν, ἀλλὰ ῥῦσαι ἡμᾶς ἀπὸ τοῦ πονηροῦ.

(β) καὶ ἠνέχθη ἡ κεφαλὴ αὐτοῦ ἐπὶ πίνακι καὶ ἐδόθη τῷ κορασίῳ.

(γ) οἱ δυλίζοντες τὸν κώνωπα.

(δ) ἦλθεν Μαρία ἡ Μαγδαληνὴ καὶ ἡ ἄλλη Μαρία.

5. Explain σκάνδαλον, Ἰσκαριώτης, Γολγοθᾶ, Πιλᾶτος, γραμματεύς.

MONDAY, *December* 10, 1883. 12½—3.

CICERO PRO P. SULLA. (A)

1. TRANSLATE:

An tum in tanto imperio tantaque potestate non dicis me fuisse regem, nunc privatum regnare dicis? Quo tandem nomine? 'Quod in quos testimonia dixisti' inquit, 'damnati sunt: quem defendis, sperat se absolutum iri.' Hic tibi ego de testimoniis meis hoc respondeo: si falsum dixerim, te in eosdem dixisse, sin verum, non esse hoc regnare, cum verum iuratus dicas, probare.

To what time does the word *tum* refer?

2. Translate:

O patrem Cornelium sapientem, qui, quod praemi solet esse in indicio, reliquerit, quod turpitudinis in confessione, id per accusationem fili susceperit! Sed quid est tandem, quod indicat per istum puerum Cornelius? Si vetera, mihi ignota, cum Hortensio communicata, respondit Hortensius; sin, ut ais, illum conatum Autroni et Catilinae, cum in campo consularibus comitiis, quae a me habita sunt, caedem facere voluerunt, Autronium tum in campo vidimus—sed quid dixi vidisse nos? Ego vidi.

What is the difference between *iste* and *ille?*

Parse *praemi, indicat, vetera.*

State Cicero's argument so as to shew the meaning of the interrupted sentence.

3. Translate:

Neque tamen istorum facinorum tantorum, tam atrocium crimen, iudices, P. Sullae persona suscipit. Iam enim faciam, criminibus omnibus fere dissolutis, contra atque in ceteris causis fieri solet, ut nunc denique de vita hominis ac de moribus dicam. Etenim de principio studuit animus occurrere magnitudini criminis, satis facere exspectationi hominum, de me aliquid ipso, quia accusatus eram, dicere: nunc iam revocandi estis eo, quo vos ipsa caussa, etiam tacente me, cogit animos mentisque convertere.

Parse *facinorum, faciam, eo.*

Explain the words *contra atque in ceteris causis fieri solet,* and *quia accusatus eram.*

4. Translate:

Sed cum huic omnia cum honore detracta sint, cum in hac fortuna miserrima ac luctuosissima destitutus sit, quid est quod expetas amplius? Lucisne hanc usuram eripere vis, plenam lacrimarum atque maeroris, in qua cum maximo cruciatu ac dolore retinetur? Libenter reddiderit, adempta ignominia foedissimi criminis. An vero inimicum ut expellas? Cuius ex miseriis, si esses crudelissimus, videndo fructum maiorem caperes quam audiendo.

Parse *reddiderit, adempta, caperes.*

Explain *cum honore.*

5. Translate and explain:

Si quaeris, qui sint Romae regnum occupare conati, ut ne replices annalium memoriam, ex domesticis imaginibus invenies.

MONDAY, *December* 10, 1883. 12½—3.

CICERO PRO P. SULLA. (B)

1. TRANSLATE:

Hoc totum eius modi est, iudices, ut, si ego sum inconstans ac levis, nec testimonio fidem tribui convenerit nec defensioni auctoritatem, sin est in me ratio rei publicae, religio privati offici, studium retinendae voluntatis bonorum, nihil minus accusator debet dicere quam a me defendi Sullam, testimonio laesum esse Autronium. Videor enim iam non solum studium ad defendendas caussas, verum etiam opinionis aliquid et auctoritatis adferre.

Parse *testimonio, offici.* Explain the argument in your own words.

2. Translate:

Per me ego veritatem patefactam contaminarem aliquo mendacio? Quemquam denique ego iuvarem, a quo tam crudelis insidias rei publicae factas, et me potissimum consule, putarem? Quod si iam essem oblitus severitatis et constantiae meae, tamenne tam amens eram, ut, cum litterae posteritatis caussa repertae sint, quae subsidio oblivioni esse possent, ego recentem putarem memoriam cuncti senatus commentario meo posse superari?

What is the difference between *aliquis* and *quisquam?*

Parse *potissimum, subsidio.*

State the facts to which Cicero here refers.

3. Translate:

Iam vero illud quam incredibile, quam absurdum, qui Romae caedem facere, qui hanc urbem inflammare vellet, eum familiarissimum suum dimittere ab se et amandare in ultimas terras! Utrum, quo facilius Romae ea, quae conabatur, efficeret, si in Hispania turbatum esset? At haec ipsa per se sine ulla coniunctione agebantur. An in tantis rebus, tam novis consiliis, tam periculosis, tam turbulentis, hominem amantissimum sui, familiarissimum, coniunctissimum officiis consuetudine usu, dimittendum a se arbitrabatur?

Give some account of the person described as *hominem amantissimum &c.*

Parse *vellet, quo, Romae.*

4. Translate:

Huic puero, qui est ei vita sua multo carior, metuit, cui honoris integros fructus non sit traditurus, ne aeternam memoriam dedecoris relinquat. Hic vos orat, iudices, ut se aliquando, si non integra fortuna, at ut adflicta, patri suo gratulari sinatis; huic misero notiora sunt itinera iudiciorum et fori quam campi et disciplinarum. Non iam de vita P. Sullae, iudices, sed de sepultura contenditur: vita erepta est superiore iudicio, nunc ne corpus eiciatur laboramus.

Parse *suo, gratulari.*

Explain *superiore iudicio.*

5. Translate and explain:

Haec inter nos partitio defensionis non est fortuito, iudices, nec temere facta.

TUESDAY, *December* 11, 1883. 9—11½.

EURIPIDES, TROADES. (A)

1. TRANSLATE:

ἴσως με, κἂν εὖ κἂν κακῶς δόξω λέγειν,
οὐκ ἀνταμείψει, πολεμίαν ἡγούμενος.
ἐγὼ δ' ἃ σ' οἶμαι διὰ λόγων ἰόντ' ἐμοῦ
κατηγορήσειν ἀντιθεῖσ' ἀμείψομαι
τοῖς σοῖσι τἀμὰ καὶ τὰ σ' αἰτιάματα.
6 πρῶτον μὲν ἀρχὰς ἔτεκεν ἥδε τῶν κακῶν
Πάριν τεκοῦσα· δεύτερον δ' ἀπώλεσε
Τροίαν τε κἄμ' ὁ πρέσβυς, οὐ κτανὼν βρέφος,
δαλοῦ πικρὸν μίμημ', Ἀλέξανδρόν ποτε.
ἐνθένδε τἀπίλοιπ' ἄκουσον ὡς ἔχει.
ἔκρινε τρισσὸν ζεῦγος ὅδε τρισσῶν θεῶν·
καὶ Παλλάδος μὲν ἦν Ἀλεξάνδρῳ δόσις
Φρυξὶ στρατηγοῦνθ' Ἑλλάδ' ἐξανιστάναι.
Ἥρα θ' ὑπέσχετ' Ἀσιάδ' Εὐρώπης θ' ὅρους
τυραννίδ' ἕξειν, εἴ σφε κρίνειεν Πάρις,
Κύπρις δὲ τοὐμὸν εἶδος ἐκπαγλουμένη
δώσειν ὑπέσχετ', εἰ θεὰς ὑπερδράμοι
κάλλει.

914—931.

Explain the allusions in lines 6, 7, 8, 9.

Parse *τἀπίλοιπ'*, *θεῶν*, *ὑπερδράμοι*, *ὑπέσχετο*.

2. Translate:

ὦ χεῖρες, ὡς εἰκοὺς μὲν ἡδείας πατρὸς
κέκτησθ', ἐν ἄρθροις δ' ἔκλυτοι πρόκεισθε νῦν.
ὦ πολλὰ κόμπους ἐκβαλὸν φίλον στόμα,
ὄλωλας, ἐψεύσω μ', ὅτ' εἰσπίπτων πέπλους*,
Ὦ μῆτερ, ηὔδας, ἦ πολύν σοι βοστρύχων
πλόκαμον κεροῦμαι, πρὸς τάφον θ' ὁμηλίκων
κώμους ἐπάξω, φίλα διδοὺς προσφθέγματα.
σὺ δ' οὐκ ἔμ', ἀλλ' ἐγὼ σὲ τὸν νεώτερον,

* or λέχοι.

γραῦς, ἄπολις, ἄτεκνος, ἄθλιον θάπτω νεκρόν.
οἴμοι, τὰ πόλλ' ἀσπάσμαθ' αἵ τ' ἐμαὶ τροφαὶ,
ὕπνοι τ' ἐκεῖνοι, φροῦδά μοι. τί καί ποτε
γράψειεν ἄν σε μουσοποιὸς ἐν τάφῳ;
τὸν παῖδα τόνδ' ἔκτειναν Ἀργεῖοί ποτε
δείσαντες; αἰσχρὸν τοὐπίγραμμά γ' Ἑλλάδι.

1178—1191.

* * or ἄϋπνοί τε κλῦναι.

What custom is referred to in πλόκαμον κεροῦμαι?

Parse εἰκοὺς, ἐψεύσω, κεροῦμαι, φροῦδα.

3. Translate:

τὰν κλεινὰν εἴθ' ἔλθοιμεν
Θησέως εὐδαίμονα χώραν·
μὴ γὰρ δὴ δίναν γ' Εὐρώτα,
τὰν ἐχθίσταν θεράπναν Ἑλένας,
ἔνθ' ἀντάσω Μενέλᾳ δούλα,
τῷ τᾶς Τροίας πορθητᾷ.
τὰν Πηνειοῦ σεμνὰν χώραν,
κρηπῖδ' Οὐλύμπου καλλίσταν,
ὄλβῳ βρίθειν φάμαν ἥκουσ'
εὐθαλεῖ τ' εὐκαρπείᾳ·
τάδε δεύτερά μοι μετὰ τὰν ἱερὰν
Θησέως ζαθέαν ἐλθεῖν χώραν.
καὶ τὰν Αἰτναίαν Ἡφαίστου
Φοινίκας ἀντήρη χώραν
Σικελῶν, ὀρέων ματέρ', ἀκούω
κηρύσσεσθαι στεφάνοις ἀρετᾶς.

207—223.

What places are here meant?

Parse Φοινίκας, Μενέλᾳ.

4. What is a trilogy? What other plays of Euripides are closely connected in subject with the *Troades*?

TUESDAY, *December* 11, 1883. 9—11½.

EURIPIDES, TROADES. (B)

1. TRANSLATE:

ἀλλ' αὔτ' ἐάσω· πέλεκυν οὐχ ὑμνήσομεν
ὃς ἐς τράχηλον τὸν ἐμὸν εἶσι χἀτέρων,
μητροκτόνους τ' ἀγῶνας, οὓς οὐμοὶ γάμοι
θήσουσιν, οἴκων τ' Ἀτρέως ἀνάστασιν·
πόλιν δὲ δείξω τήνδε μακαριωτέραν
ἢ τοὺς Ἀχαιοὺς, ἔνθεος μέν, ἀλλ' ὅμως
τοσόνδε γ' ἔξω στήσομαι βακχευμάτων,
οἳ διὰ μίαν γυναῖκα καὶ μίαν Κύπριν,
θηρῶντες Ἑλένην, μυρίους ἀπώλεσαν.
ὁ δὲ στρατηγὸς ὁ σοφὸς ἐχθίστων ὕπερ
τὰ φίλτατ' ὤλεσ', ἡδονὰς τὰς οἴκοθεν
τέκνων ἀδελφῷ δοὺς γυναικὸς οὕνεκα,
καὶ ταῦθ' ἑκούσης κοὐ βίᾳ λελῃσμένης.
ἐπεὶ δ' ἐπ' ἀκτὰς ἦλυθον Σκαμανδρίους,
ἔθνησκον, οὐ γῆς ὅρι' ἀποστερούμενοι,
οὐδ' ὑψιπύργου πατρίδος· οὓς δ' Ἄρης ἕλοι,
οὐ παῖδας εἶδον, οὐ δάμαρτος ἐν χεροῖν
πέπλοις συνεστάλησαν, ἐν ξένῃ δὲ γῇ
κεῖνται. 361—379.

Explain the allusions in lines 1, 2, 3.

Parse *αὔτ'*, *εἶσι*, *λελῃσμένης*, *κεῖνται*.

2. Translate:

ἦλθον δὲ Τροίαν οὐχ ὅσον δοκοῦσί με
γυναικὸς οὕνεκ', ἀλλ' ἐπ' ἄνδρ' ὃς ἐξ ἐμῶν
δόμων δάμαρτα ξεναπάτης ἐλῄσατο.
κεῖνος μὲν οὖν δέδωκε σὺν θεοῖς δίκην,
αὐτός τε καὶ γῆ δορὶ πεσοῦσ' Ἑλληνικῷ.
ἥκω δὲ τὴν Λάκαιναν, οὐ γὰρ ἡδέως
ὄνομα δάμαρτος ἥ ποτ' ἦν ἐμὴ λέγω,
ἄξων· δόμοις γὰρ τοῖσδ' ἐν αἰχμαλωτικοῖς
κατηρίθμηται Τρῳάδων ἄλλων μέτα.

οἵπερ γὰρ αὐτὴν ἐξεμόχθησαν δορὶ,
κτανεῖν ἐμοί νιν ἔδοσαν, εἴτε μὴ κτανὼν
θέλοιμ' ἄγεσθαι πάλιν ἐς Ἀργείαν χθόνα.
ἐμοὶ δ' ἔδοξε τὸν μὲν ἐν Τροίᾳ μόρον
Ἑλένης ἐᾶσαι, ναυπόρῳ δ' ἄγειν πλάτῃ
Ἑλληνίδ' ἐς γῆν, κᾆτ' ἐκεῖ δοῦναι κτανεῖν.

864—878.

What literary allusion has been discovered in the first two lines?

Parse *ξεναπάτης, πεσοῦσ', κατηρίθμηται, κτανεῖν.*

3. Translate:

τέκνων δὲ πλῆθος ἐν πύλαις
δάκρυσι κατάορα στένει, βοᾷ βοᾷ,
μᾶτερ, ὤμοι, μόναν δή μ' Ἀχαιοὶ κομίζουσι σέθεν ἀπ' ὀμμάτων
κυανέαν ἐπὶ ναῦν
εἰναλίαισι πλάταις
ἢ Σαλαμῖν' ἱερὰν,
ἢ δίπορον κορυφὰν
Ἴσθμιον, ἔνθα πύλας
Πέλοπος ἔχουσιν ἕδραι.
εἴθ' ἀκάτου Μενέλα
μέσον πέλαγος ἰούσας,
δίπαλτον ἱερὸν ἀνὰ μέσον πλατᾶν πέσοι
Αἰγαίου κεραυνοφαὲς πῦρ.

1089—1103.

What places are here meant?

Parse *Μενέλα, ἰούσας.*

4. For what event is the year in which the *Troades* was produced memorable? What passage in the play has been supposed to refer to it?

TUESDAY, *December* 11, 1883. 12½—3.

GREEK AND LATIN GRAMMAR. (A)

1. DECLINE in the singular *ὄνομα, ἕδρα.*

Write down the genitive and accusative singular of *χείρ, φύσις*; and the dative and accusative plural of *γυνή, βασιλεύς*; and give the gender of *στέφανος, κάρα, φρήν.*

2. Decline in the plural *consilium, libido;* write down the nominative and dative singular of *locis, solacia, sermonibus, collegae;* and give the gender of *nuntius, tempus, vox.*

3. Write down in full the genitive singular and dative plural of *πᾶς, οὗτος,* and the accusative singular and the accusative plural of *ὁ, ἡ, τό.*

Give the other degrees of comparison of *πλεῖστος, φίλος, σοφῶς.*

4. Write down in full the dative and accusative singular of *totus, qui;* the accusative plural of *brevis* and the dative plural of *ambo.*

Give the other degrees of comparison of *gravius, benevolentissimus, minor.*

5. Write down the

3rd plur. fut. ind. act. of *τίθημι,*
3rd sing. 1 aor. ind. act. of *διόλλυμι,*
2nd sing. pres. imperative of *ἕπομαι,*
1st sing. perf. ind. act. of *πάσχω,*
3rd sing. imperf. ind. pass. of *φιλέω,*
2nd sing. fut. ind. act. of *ἀπορρήγνυμι,*
1st sing. 1 aor. ind. pass. of *τέμνω,*
1 aor. inf. act. of *εὐφραίνω.*

6. Write down the

2nd sing. imperf. subj. act. of *capio,*
2nd plur. fut. ind. act. of *reperio,*
3rd sing. pres. subj. of *arbitror,*
pres. infinitive of *perfruor,*
and the 1st plur. of each tense of the subjunctive of *possum.*

7. Parse and give the English of *γένει, ἄρχει, πρόσφορον, σοῖσι, αὖθις, deserit, foris, preces, insignia, cuiusquam.*

8. (*a*) Parse *σφε, σοί, κακῶς,* explaining their construction in the following line,

τοίγαρ σφε σὺν σοὶ βούλομαι δρᾶσαι κακῶς.

(*b*) Parse *vestra, qui, hoc,* explaining their construction in the following sentence,

Vestra enim, qui cum summa elegantia atque integritate vixistis, hoc maxime interest.

TUESDAY, *December* 11, 1883. 12½—3.

GREEK AND LATIN GRAMMAR. (B)

1. DECLINE in the singular *παῖς, ἀναιδεία.*

Write down the genitive and accusative singular of *ἐλπίς, δεσπότης*; and the dative and accusative plural of *πούς, δῶρον*; and give the gender of *κάλλος, κέλευθος, νεκρός.*

2. Decline in the plural *scelus, gens;* write down the nominative and accusative singular of *viros, gregibus, itinera, vires;* and give the gender of *consulatus, crimen, salus.*

3. Write down in full the dative and accusative singular of *λύσας, οὗτος*; the vocative singular of *καλός*, and the nominative plural of *ὁ, ἡ, τό.*

Give the other degrees of comparison of *ὀξύς, ἐχθίων, ἀληθῶς.*

4. Write down in full the dative and accusative singular of *noster, is;* the dative singular and the accusative plural of *ullus;* and the genitives singular of *aliquis, uterque, idem.*

Give the other degrees of comparison of *leviter, miser, magnificus.*

5. Write down the

3rd plur. fut. ind. act. of *ἵημι,*
1st sing. perf. ind. act. of *ἐκλείπω,*
2nd sing. 2 aor. imperative act. of *παραδίδωμι,*
1st sing. fut. ind. act. of *πάσχω,*
2nd sing. imperf. ind. pass. of *τιμάω,*
1st sing. 1 aor. ind. act. of *ἐκτρέφω,*
3rd plur. 2 aor. ind. act. of *συνεξαιρέω,*
pres. inf. act. of *πίμπρημι.*

6. Write down the

3rd sing. perf. subj. act. of *convenio,*
perfect infinitive act. of *pereo,*
2nd plur. imperative of *contueor,*
3rd sing. perf. ind. pass. of *cogo,*
and the 2nd sing. of each tense of the subjunctive of *malo.*

7. Parse and give the English of *νεώς, ὕβριζες, λυγράν, τἀμά, δεῦρο, irasceris, intus, faces, satis, suorum.*

8. (*a*) Parse *ἅ, βούλει, τί,* explaining their construction in the following line,

ἕτοιμ' ἃ βούλει τἀπ' ἐμοῦ. δράσεις δὲ τί;

(*b*) Parse *multum, quaesita, una,* explaining their construction in the following sentence,

Haec diu multumque et multo labore quaesita una eripuit hora.

ANSWERS.

SECOND GENERAL EXAMINATION.

MONDAY, *November* 26, 1883.

STATICS. (A.) (Page 39.)

3. $\sqrt{58}$ lbs. 4. A forces P along each line.
5. 21 lbs.; distance from same end $4\frac{1}{3}$ inches. 7. 120 lbs.
10. 45 lbs. and 39 lbs.

STATICS. (B.) (Page 40.)

3. $\sqrt{14}$ lbs. 4. 5 lbs. 5. 21 lbs.; distance from same end, $2\frac{2}{3}$ inches.
7. 18 lbs. 10. 133 lbs. and 121 lbs.

WEDNESDAY, *November* 28, 1883.

ALGEBRA. (A.) (Page 50.)

1. (1) $x=12$; (2) $x=10$; (3) $x=\frac{1}{7}$ or -1; (4) $x=a+b$.
2. $4x^2-15x-4=0$. 3. £20, £2. 10*s*.
4. (1) $x=\frac{1}{7}$, $y=\frac{1}{4}$; (2) $x=(a+b)^2$, or $\frac{(a+b)^2}{4}$; (3) $x=0, -2, 6, 8$; $y=-2, 0, 8, 6$.
5. 48. 6. 88 yards. 7. $\sqrt{ab}$, $2\frac{1}{4}$. 9. £45.
10. 8. 11. 3,7203. 12. (1) 94850; (2) $281\frac{1}{3}$, 324.

ALGEBRA. (B.) (Page 51.)

1. (1) $x=14$, (2) $x=5$, (3) $x=\frac{1}{5}$ or -1; (4) $x=c+d$.
2. $3x^2+8x-3=0$. 3. £20, £2. 10*s*.
4. (1) $x=\frac{1}{6}$, $y=\frac{1}{7}$; (2) $x=(c+d)^2$ or $\frac{(c+d)^2}{4}$; (3) $x=2, 1, -11, -12$; $y=1, 2, -12, -11$.
5. 24. 6. 176 yards. 7. $\frac{b^2}{a}$, $1\frac{1}{2}$. 9. £30.
10. 9. 11. 3,9375. 12. (1) 68895, (2) $412\frac{2}{5}$, $416\frac{2}{3}$.

SECOND PREVIOUS EXAMINATION.

THURSDAY, *December* 6, 1883.

ARITHMETIC. (A.) (Page 59.)

1. 200,570,400; £5. 16*s*. $8\frac{1}{2}$*d*. 2. 2520; 23. 3. $\frac{37}{40}$, $4\frac{2}{3}$.
4. ·02734375, $\cdot000\dot{7}8571\dot{4}\dot{2}$; 6*d*. 5. 250. 6. £303. 18*s*. 11*d*.
7. 48. 8. £1550. 16*s*. $0\frac{1}{2}$*d*.; £3225. 16*s*. 9. £24 increase.
10. $5\frac{7}{8}$ p. c. per annum.

ARITHMETIC. (B.) (Page 60.)

1. 480,640,200; £9. 19*s*. 0½*d*. 2. 3960; 29. 3. $\frac{11}{12}$, $15\frac{3}{4}$.
4. ·0703125, ·00053846$\dot{1}$; 1*d*. 5. 375. 6. £273. 2*s*. 1*d*.
7. 40 per cent. 8. £193. 3*s*. 7½*d*.; £9112. 10*s*. 9. £18 increase.
10. $6\frac{2}{3}$ p. c. per annum.

Thursday, *December* 6, 1883.

ELEMENTARY ALGEBRA. (A.) (Page 61.)

1. $(a+b)(x-2y)$. 2. $bmp-cmn-anp$. 3. $x^2-(a+b)x-ab$.
4. $(x-8)(x+6)$, $xy^2(xy+1)(xy-1)$, $(a-x)(a^2+ax+x^2)$, $(2a-b)(2c-b)$, $x(x-4y)^2$.
5. x^2-5x+2. 6. (1) 1; (2) 4; (3) 1, 1.
7. $\frac{a^2x^2}{b^2y^2}+\frac{b^2y^2}{a^2x^2}-\frac{2ax}{by}-\frac{2by}{ax}+3$. 8. (1) $\frac{4}{(x-2)(x-4)^2}$, (2) $\frac{2a(a-x)}{x(a+x)}$.
9. (1) 4 or $\frac{23}{26}$; (2) $x=\pm 2$ or $\pm\frac{32}{\sqrt{345}}$, $y=\pm 3$ or $\mp\frac{41}{\sqrt{345}}$.
10. $\frac{11}{3}$. 11. $\frac{1}{3}\sqrt{15}$.

ELEMENTARY ALGEBRA. (B.) (Page 62.)

1. $(a+b)(x+y)$. 2. $anp-bmp-cmn$. 3. $x^2+(2a-b)x-ab$.
4. $(x-7)(x+4)$, $a(ax^2+b)(ax^2-b)$, $(a+x)(a^2-ax+x^2)$, $b(2a+b-2c)$, $xy(x+3y)^2$.
5. x^2-3x+4. 6. (1) 3; (2) 3; (3) 2, 1.
7. $\frac{a^2x^2}{b^2y^2}+\frac{b^2y^2}{a^2x^2}-\frac{2ax}{by}-\frac{2by}{ax}+3$. 8. (1) $\frac{4}{(x-1)^2(x-3)}$; (2) $6a^2(a+x)$.
9. (1) 1 or $-\frac{53}{3}$; (2) $x=\pm 3$ or $\pm\frac{31}{\sqrt{145}}$, $y=\pm 2$ or $\mp\frac{8}{\sqrt{145}}$.
10. $\frac{37}{12}$. 11. $\frac{1}{4}\sqrt{34}$.

Friday, *December* 7, 1883.

ADDITIONAL ALGEBRA. (A.) (Page 63.)

1. $\frac{m}{2}\{(3-m)x+(m-1)y\}$. 2. (1) 9; (2) $16\frac{2}{3}$; (3) $2\frac{85}{128}$.
3. ± 2, 4, ± 8, 16, ± 32; ± 32, 16, ± 8, 4, ± 2. 4. 12, 48, 96.
6. 22 miles. 7. 12, 4. 8. 1, 2.
9. $\bar{2}$·5051500, $\bar{1}$·5563026, 2·8573326, 1·8627278. 10. 1·0457609, 111·1163.

ADDITIONAL ALGEBRA. (B.) (Page 64.)

1. $\frac{y^m-x^m}{x^{m-2}(y-x)}$. 2. (1) 7; (2) $4\frac{1}{2}$; (3) -1060. 3. 3, 5, 7, 9, &c.
4. 24, 48, 80. 6. 14 miles. 7. 12, 6. 8. $-\frac{9}{2}$, -3·356.
9. $\bar{2}$·8573326, $\bar{1}$·8750613, ·8627278, $\bar{3}$·0969100. 10. 2·0915122, 12·34525.

SECOND SPECIAL EXAMINATION IN MORAL SCIENCE FOR THE ORDINARY B.A. DEGREE.

FRIDAY, *November* 30, 1883. 9—12.

POLITICAL ECONOMY.

1. INDICATE the principal *economical* advantages of a highly civilized community Are there any corresponding disadvantages as compared with a savage or backward country?

2. It has been maintained that the "luxury" of a country is necessarily determined, in the long run, by its economic efficiency: is this so?

3. In what sense is the act of selling goods a mere exchange of equivalents? If it be so, why are producers so anxious to sell?

4. How should you distinguish between Productive and Unproductive Consumption? Could you divide, in accordance with this distinction, the expenditure on railway travelling, or that on letter-writing?

5. State exactly what you understand by the "Wages-fund Theory," and the principal grounds on which it is attacked.

6. Under what conditions is it claimed that "rent does not enter into the cost of agricultural produce"? Is it then the case that practically corn would not be cheaper were farmers relieved from paying rent?

7. What are the legal provisions for adding to our currency, as regards, (i) bank notes, (ii) gold and silver coinage? What do you know of the processes as practically carried out?

8. Give some account of any schemes for "coining the land of the country into money," or "issuing notes against property generally." Are such schemes absolutely futile?

9. On what grounds is it maintained that a general Glut is impossible? How do you explain the facts which have given rise to the fear of such a contingency?

FRIDAY, *November* 30, 1883. 2—5.

POLITICAL ECONOMY.

1. EXPLAIN the ordinary functions of an English Trades Union.

2. In what sense, and for what purpose, has the phrase "Earnings and interest fund" been introduced?

3. Describe the principal requisites for securing steadiness of value in any commodity. On what grounds is it maintained that fluctuations of price are great in trades where there is much fixed capital?

4. Analyse the Cost of Production of an article into its principal constituent elements; take, for an illustration, Chinese ivory carvings, as sold in England. With what object has it been proposed to speak of Cost of Reproduction?

5. What are the principal causes which, in the progress of society, tend respectively to increase and diminish the amount of money employed in a country, and in which direction do you consider the resultant tendency to lie?

6. Complaints used to be rife against the practice of melting the coinage. To what extent do the same causes now exist, and what effects do they now produce?

7. With what objects was the Bank Charter Act enacted, and how far has experience justified the expectations of its originators?

8. How should you distinguish between direct and indirect taxation? To what extent is each of these now resorted to in England for imperial and municipal purposes?

9. What are the main arguments urged against (1) rapidly, (2) gradually paying off the National Debt? Give illustrations from the history of our own or other countries of methods which have been adopted with this object in view.

SATURDAY, *December* 1, 1883. 9—12.

POLITICAL ECONOMY.

1. SHEW the importance of Agriculture in the industrial system of a country.

In what ways, according to Adam Smith, was the ancient policy of Europe unfavourable to the improvement and cultivation of land?

2. "We trust with perfect security that the freedom of trade, without any attention of Government, will always supply us with the wine which we have occasion for; and we may trust with equal security that it will always supply us with all the gold and silver which we can afford to purchase or to employ, either in circulating our commodities, or in other uses."

Against what fallacy was this argument of Adam Smith's directed?

Describe in some detail the manner in which "freedom of trade" actually operates in regulating the amount of gold and silver that circulates in a country.

3. "Supposing the current money of two countries equally near to the standard of their respective mints, and that the one pays foreign bills in this common currency, while the other pays them in bank money, it is evident that the computed exchange may be in favour of that which pays in bank money, though the real exchange should be in favour of that which pays in current money."

Shew precisely why this "is evident," explaining what is here meant by Bank Money as distinguished from the common currency, and by the computed exchange as distinguished from the real exchange.

4. Explain and discuss the statement that "the unlimited, unrestrained freedom of the corn trade, as it is the only effectual preventative of the miseries of a famine, so it is the best palliative of the inconveniences of a dearth."

5. Explain and examine Adam Smith's views as to the effect on the rate of profit in any country of the monopoly of her colonial trade.

6. "The capital error of this system seems to lie in its representing the class of artificers, manufacturers, and merchants as altogether barren and unproductive."

Give some account of the system here referred to, and of Adam Smith's criticisms upon it.

In what respects did it resemble Adam Smith's own system of Political Economy?

7. In what exceptional cases did Adam Smith admit the possible expediency of protection to home industries?

Would you admit these exceptions? and would you add any others?

8. Explain the statement that "the excess of imports over exports in any country may be regarded as a measure of the extent to which it is a creditor of other countries."

9. Explain what you understand by "Reciprocity" as distinguished from Free Trade.

Shew that it would be impracticable for England to carry out a policy of reciprocity.

SECOND SPECIAL EXAMINATION IN HISTORY FOR THE ORDINARY B.A. DEGREE.

FRIDAY, *November* 30, 1883. 9—12.

ENGLISH HISTORY.

1. MENTION some of the chief administrative reforms of Henry I., and describe the general character of his policy.

2. Give a short account of the invasion and conquest of Ireland.

3. Describe the character of Edward I., and explain the constitutional importance of his reign.

4. What were the chief social grievances complained of in the reigns of Edward III. and Richard II.?

5. Give a short historical sketch of the 'Hundred years' war.'

6. Trace the effect of the 'Wars of the Roses' on the position of the different classes of the community.

7. Describe the conduct and policy of Elizabeth in regard to the Protestants of the Continent.

8. What was the cause of Cromwell's war with the Dutch? Explain the general aim of his foreign policy.

9. Write a short account of 'the Popish Plot.'

10. In what great wars was England engaged in the 18th century? Explain their causes and estimate their results.

11. What were the chief provisions of the India Bills of Fox and Pitt? Describe the state of political parties at the time.

12. Give a brief account of the following:

(i) 'The Mise of Lewes.'
(ii) 'The Six Articles.'
(iii) 'The Massacre of Glencoe.'
(iv) 'The Luddite Riots.'

FRIDAY, *November* 30, 1883. 2—5.

HALLAM'S CONSTITUTIONAL HISTORY.

1. WHAT was the Statute for the Security of the Subject under a King *de facto?* How, and with what success, was it appealed to at the trial of Sir Harry Vane?

2. Describe the ecclesiastical policy of Elizabeth with regard to the Puritans.

3. By what title did James I. hold the Crown? Explain the Stuart theory of Kingship.

4. Compare the terms of the abortive proposals of 1610 for the abolition of the feudal revenue with the agreement arrived at in 1660.

5. What were the provisions of the Petition of Right? How were they observed by Charles I.?

6. Shew that religious as well as constitutional questions were concerned in bringing about the Great Rebellion.

7. What was the Test Act? Account for the fact that the Nonconformists did not oppose its passing.

8. Enumerate the judicial powers possessed by the House of Lords.

9. Give an account of the Kentish Petition of 1701.

10. Describe Strafford's policy in Ireland.

11. State briefly the chief events in the career of any *two* of the following:—Anne Boleyn, Lord Burleigh, Archbishop Laud, Sir William Temple, The Duke of Marlborough, Bishop Atterbury.

12. Write down what you know of Cowell's Interpreter, the Book of Sports, the Instrument of Government, and the Peerage Bill.

SATURDAY, *December* 1, 1883. 9—12

RANKE'S HISTORY OF THE POPES.

1. EXPLAIN the circumstances which brought about the alliance between the Papacy and the Frankish Empire.

2. What are the grounds for the proposition that Julius II. must "be regarded as the founder of the papal states"?

3. How was Luther first roused to oppose the ecclesiastical system of his time? What was his attitude towards the attempts made to reconcile the Reformers and the Papacy?

4. Write a brief account of the Inquisition.

5. Referring to the Pontificate of Paul IV., Ranke says "If we survey the world from the heights of Rome, how enormous were the losses sustained by the Catholic faith!" Shew in detail the extent of these losses.

6. What reforms were introduced into the Roman Church by the Council of Trent?

7. Enumerate the causes which brought about the Counter-Reformation. What districts did it win back from Protestantism?

8. Write a short sketch of the policy of the Papacy towards England during the reigns of Elizabeth and James I.

9. Give an account of the results of the Jesuit missions in America, Asia, and Africa.

10. What is meant by the *Gallican Immunities*? Narrate the history of the conflict between Louis XIV. and Innocent XI., Alexander VIII. and Innocent XII. with regard to them.

SECOND SPECIAL EXAMINATION IN LAW FOR THE ORDINARY B.A. DEGREE.

FRIDAY, *November* 30, 1883. 9—12.

BLACKSTONE. I.

1. GIVE a short account of the chief laws and customs of the Houses of Lords and Commons. What privileges are common to the two houses?

2. Comment upon the maxim: "The King can do no wrong."

3. Give a short historical sketch of the land tax and the excise duties.

4. What are the duties of the Sheriff?

5. Give the general rules for determining a master's liability for the acts of servants.

6. Give an account of the feudal system so far as it affected the possession of land. What were the principal species of tenure?

7. What is *dower* and out of what estates or interests in land is it now assignable?

8. What is an *estate tail?* Give its chief incidents.

9. Explain and illustrate the difference between *right of possession* and *right of property.* How do the limitation acts affect these rights?

10. What is a mortgage? What is the *equity of redemption,* and what is meant by *foreclosure?*

11. Explain when the property in goods will pass to a purchaser although the vendor has none at all in them.

12. Explain the terms and phrases: *Jetsam flotsam and ligan, Feme covert, Interesse termini, Per my et per tout.*

FRIDAY, *November* 30, 1883. 2—5.

BLACKSTONE II.

1. EXPLAIN the methods known to English law by means of which private wrongs may be redressed by the joint act of the parties.

2. Distinguish between *assault* and *battery*. Are these always punishable?

3. Give a brief account of the several branches of jurisdiction exclusively exercised by the Chancery Division of the High Court of Justice.

4. What considerations should guide us in fixing the measure of the punishment of an offence?

5. Classify the various degrees of guilt of persons who have committed, or assisted in committing, a crime.

6. Define the offences of *Rescue, Theft-bote, Perjury, Extortion.*

7. When is *homicide* justifiable, and when felonious?

8. Define *larceny*, and point out wherein it differs from *embezzlement.*

9. How far has a prisoner the right to choose the members of the jury which shall try him?

10. Explain how a judgment may be reversed.

11. Give a short historical sketch of the law of forfeiture of property consequent upon the conviction of a prisoner for a felony.

12. Explain the meanings of the following words or phrases: *A court of record, Scandalum magnatum, Præmunire, Certiorari, Fieri facias.*

SATURDAY, *December* 1, 1883. 9—12.

MACKENZIE'S ROMAN LAW.

1. GIVE a short sketch of the Roman Constitution during the regal period.

2. Define 'Jus Prætorium,' and compare the ordinary functions of the Roman Prætor with those of an English Chancellor.

3. Write a short account of Justinian's reforms, and explain the general order and arrangement of his Institutes.

4. Explain carefully all that is implied in the term 'Status.'

Discuss the question whether a slave could have a status, and point out the different ways in which status could be lost or changed.

5. Describe the institution of 'Patria Potestas' as it existed at the time of the XII Tables, and note the principal changes which it subsequently underwent.

6. "Traditionibus et usucapionibus dominia rerum, non nudis pactis, transferuntur."

Explain fully the meaning of this rule.

7. Compare the English and Roman Law rules on the subject of the liability of Inn-keepers.

8. By whom might the 'Querela inofficiosi testamenti' be brought? What was the effect of its being successful or unsuccessful?

9. Distinguish between 'Specificatio' and 'Commixtio', and state the rules of Law relating to each.

10. Explain and illustrate by an example the meaning of 'Indebiti Solutio.' Under what head of Roman Law is the subject discussed?

11. What form of Roman Will was commonly in use in Justinian's time?

Shew how it resembles and differs from an English will under the Wills Act (1 Vict. c. 26).

12. Explain the following:—

(i) 'Jus in re aliena.'

(ii) 'Locatio Operis.'

(iii) 'Collatio Bonorum.'

(iv) 'Res Mancipi.'

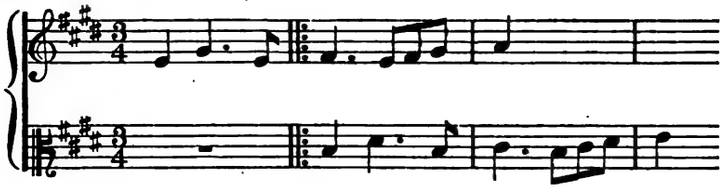
FINAL EXAMINATION FOR THE DEGREE OF BACHELOR OF MUSIC.

THURSDAY, *December* 6, 1883. 10 A.M. to 1 P.M.

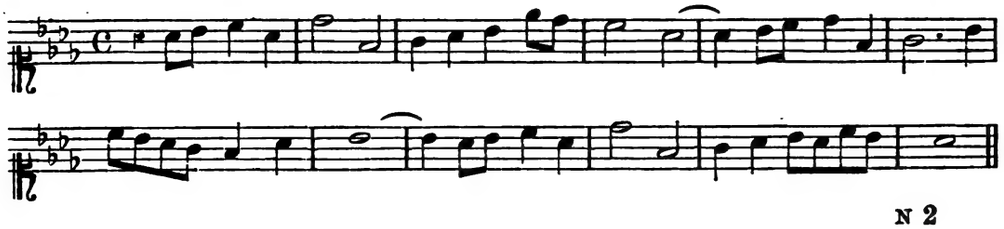
COUNTERPOINT, CANON AND FUGUE.

I. WRITE a Fugue in two parts on the following subject, modulating into the keys of F, G minor, and E flat, in any order preferred, and introducing at least one incomplete Stretto.

II. Continue the following canon at the 4th below. Make it perpetual or infinite and strict as to intervals; and let it include at least ten bars within the repeat, concluding with a free coda. Figure the Bass.

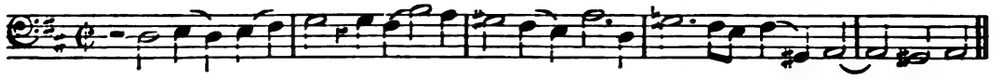


III. Find the answer to the following infinite canon for two in one. Write the result in score. Figure the Bass, and mark where the repeat is to begin and end.

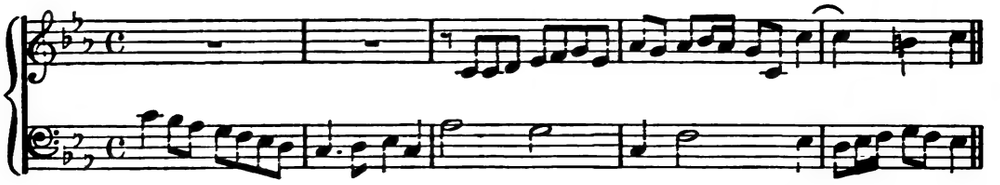


IV. Write *Answers* to the following Fugue *Subjects*. State, in each case, whether the Answer is real or tonal; and, if tonal, whether the Subject is authentic or plagal.

A

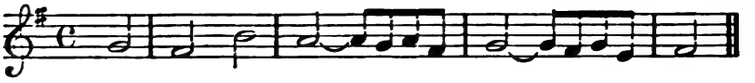


B

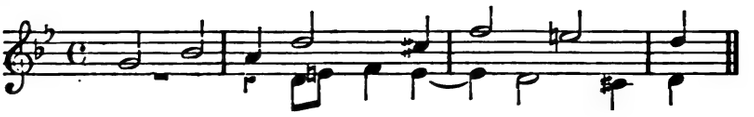


V. Write the *Subjects* to which the following Phrases are the *Answers*.

A



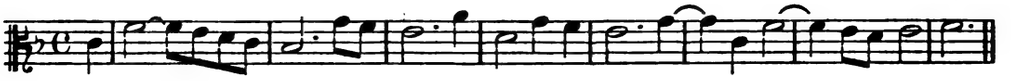
B



VI. Write Counterpoint of the First Species for 2 Sopranos, Alto and Tenor, (each in its proper clef) above the following subject. Figure the Bass.

VII. Transpose the same subject for Treble, and write below it Counterpoint of the Fourth Species for Bass and of the Third Species for Alto. The score to consist of three parts in all. Figure the Bass.

VIII. Write Double Counterpoint in the 8th, of the Fifth Species, upon the following subject. Also write the inversion and figure the Bass in each instance.



IX. Mention the chief points of difference between the system of Counterpoint adopted by Cherubini, and that taught by Richter.

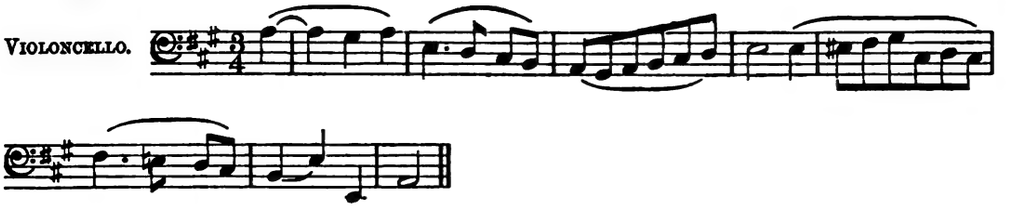
THURSDAY, *December* 6, 1883. 2 to 5 P.M.

HARMONY AND INSTRUMENTATION.

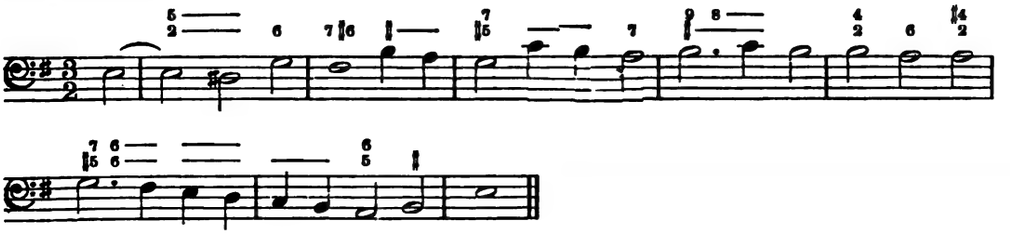
I. WRITE a Pianoforte accompaniment to the following Melody, using Arpeggios, and occasional passing-notes.

II. Write the Melody and Figured Bass of a Long Metre Psalm-tune in the key of G minor: the first Section to end with a Half-Close, the second Section to modulate to, and end in B flat, the third Section to modulate to, and end in C minor, and the fourth Section to return to the original Key.

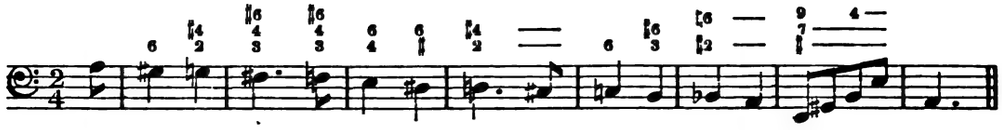
III. Write parts for one Violin and Viola above the following Bass. Figure the Bass.



IV. Write parts for Soprano, Alto and Tenor, (each in its proper clef) according to the figuring, above the following Bass. Insert occasional passing-notes. All discords except passing-notes to be prepared. Mark by a cross all suspensions, as distinguished from other discords.

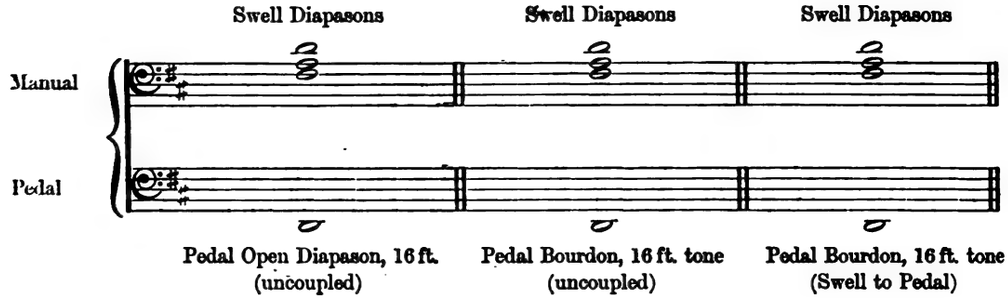


V. Write for pianoforte three parts, according to the figuring, above the following bass. Insert occasional passing-notes.



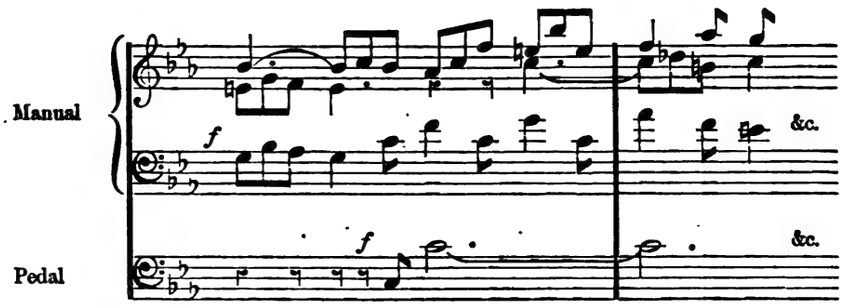
VI. Particularise the various theories which have been, from time to time, advanced in explanation of the chord of the 6th 5th and 3rd upon the subdominant of a key.

VII. Assuming an ordinary Great Organ of about twelve stops, name (approximately) those which would be drawn when the player is directed to use the 8 ft. and 4 ft. stops in combination.



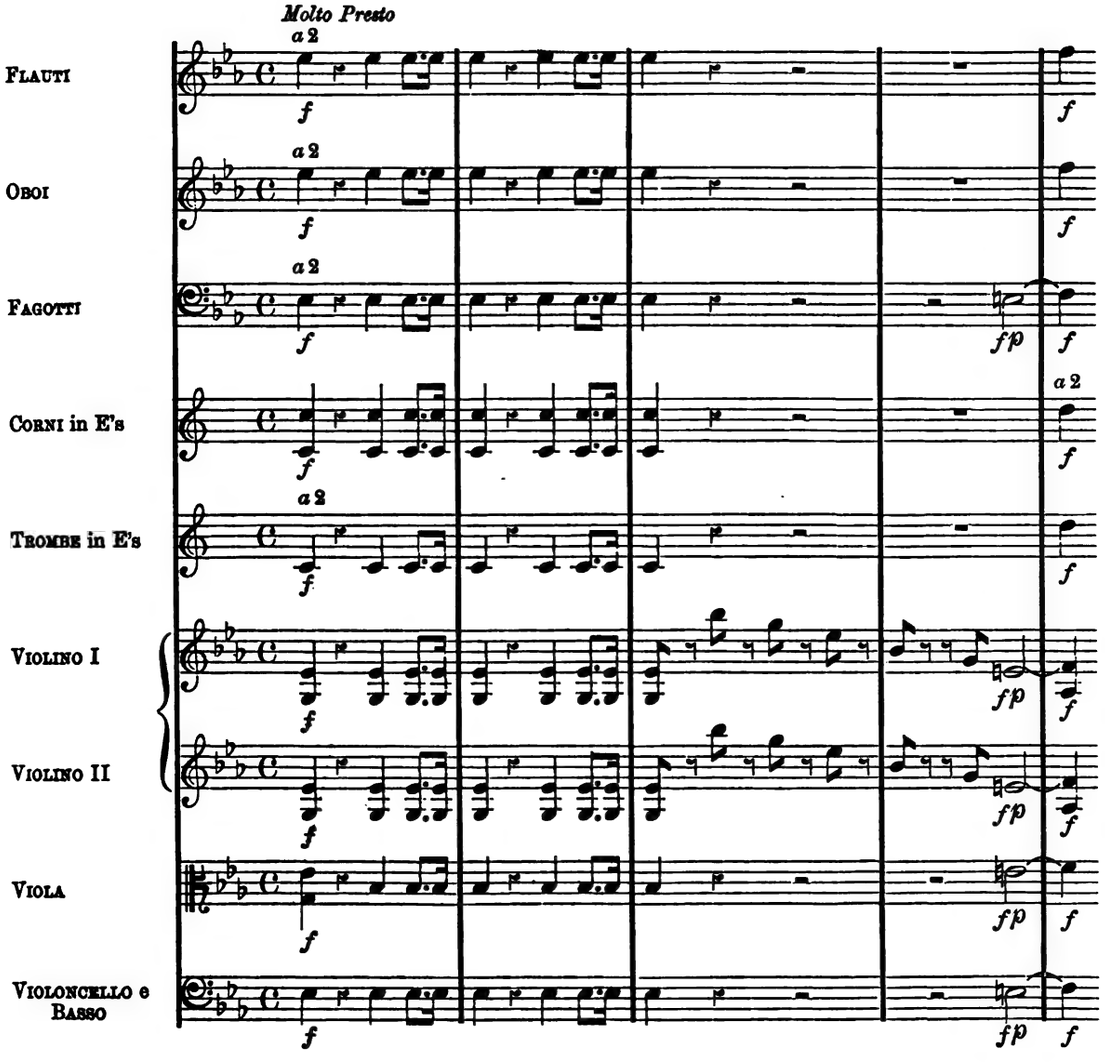
VIII. Which of the foregoing three arrangements of stops would be the most, and which the least effective? Give reasons for your answers.

IX. There is a practical difficulty in the way of giving a perfectly accurate rendering of the following passage upon English organs of average resources. Say what that difficulty is.



X. Transpose the following extract into the key of D, altering the distribution of parts where the transposed notes are impracticable on the instruments for which they are here written. Change the parts for the hautboys so as to suit clarionets, and write them in the appropriate key.

Symphony No. 26—Mozart.



SECOND SPECIAL EXAMINATION IN MECHANISM AND APPLIED SCIENCE FOR THE ORDINARY B.A. DEGREE.

FRIDAY, *November* 30, 1883. 9—12.

APPLIED MECHANICS.

1. PROVE the formula $s = \frac{1}{2}ft^2$ for the distance gone over by a body from rest in a time t under the influence of a uniform acceleration f.

2. How can the acceleration due to gravity be roughly determined by means of an Attwood's machine?

3. Four men are just enabled to move the winch-handles of a ship's windlass. If the radii of the windlass be 18 inches, the ratio of the gearing 1 to 8, and the diameter of the barrel of the windlass 12 inches, and it be observed that each man can exert a force of 100 lbs. (on the average) upon the winch-handle; what is the pull upon the cable hauled by the windlass?

4. What is meant by the centre of percussion of a given body suspended from a given point?

In what way is this connected with the theory of the pendulum?

The beam of a pair of scales is resting upon its knife edges, and it is observed to perform one complete oscillation in 5 seconds. What is the length of the equivalent pendulum, it being assumed that the length of a seconds pendulum is 39·1 inches?

5. Explain how the horse-power necessary to drive a given machine can be ascertained by experiment.

6. Prove that if a body of weight W be moving with a velocity of v feet per second the amount of energy due to its motion is $\frac{W}{32} \cdot \frac{v^2}{2}$.

Find what number of horse-power would reduce the velocity of a train of 100 tons in five minutes from 30 miles a minute to ten miles a minute.

7. How would you alter (1) the gauge, (2) the level, and (3) the position of each rail of a railway in order to enable heavy loads to pass safely round a sharp curve at high speed? What peculiarity in the form of the tires of the wheels has the same effect?

Describe any method of easing the strain on wheels and axles in passing round a curve.

8. Two parallel shafts run in the same horizontal plane, each carries a belt wheel 5 feet in diameter and a belt 12 inches wide runs over the belt wheels and is just able to transmit 30 horse-power from one shaft to the other at a speed of 120 revolutions per minute. If it be required to transmit a greater H.P. from one shaft to the other, shew how this may be done in three different ways according as the speed of the shafts, the diameter of the wheels, or the breadth of the belts are varied, and calculate the alterations required to transmit 35 instead of 30 horse-power.

In which direction must the shafts revolve in order to transmit as great a H.P. as possible for any given dimensions and speed of belt and wheels?

9. A gasometer consists of an inverted hollow cylinder 40 feet in diameter and 20 feet high, and its weight is 10 tons. It floats in a water tank which just fits it. Find how much higher the water will stand outside the cylinder than inside, it being assumed that the weight of a cubic foot of water is $62\frac{1}{2}$ lbs.

Under what pressure will the gas contained in the cylinder be?

10. Explain what is meant by the Conservation of Energy.

FRIDAY, *November* 30, 1883. 2—5.

HEAT.

1. How can the mechanical equivalent of heat be ascertained?

2. What is meant by a Siemen's regenerating furnace?

3. Describe, with diagrams, a blast furnace for smelting iron.

4. Describe any form of boiler suitable for raising steam rapidly.

5. What is meant by superheating steam? What is the advantage of it? What disadvantage attends the use of highly superheated steam?

6. What are meant respectively by lap and lead in a locomotive slide valve, and what is their use?

7. Draw an indicator diagram of a condensing engine in which the cut-off takes place at the end of the first third of the stroke, and the engine is otherwise working well with a considerable amount of cushioning and preadmission. Point out carefully the parts of the diagram influenced by these considerations.

Shew how your diagram may be used to find the horse-power of the engine.

8. In what two ways may the steam supplying an engine be regulated if its pressure is unnecessarily high?

If the pressure in the boiler be 60 lbs. per square inch, and it is found that it must either be reduced to 40 lbs. by throttling or else be cut off at half stroke, which method will be the most economical, and why?

9. Describe the various kinds of condensers used in a condensing steam engine.

10. What is meant by (1) the adiabatic expansion line of steam, (2) the expansion line of saturated steam?

11. What is the use of jacketing a steam-engine cylinder?

12. What is a fusible plug? what is its use? Describe, with drawings, how it is usually made. In what part of the boiler of a locomotive would you place it?

SATURDAY, *December* 1, 1883. 9—12.

MECHANISM.

1. DESCRIBE the elliptic pen, and shew that its movements may be represented by the rolling of one circle inside of another of twice its diameter.

2. Describe, with careful hand sketch, a double geared lathe headstock.

How can you bore the bearings for the spindle so as to be accurately true with the lathe bed?

3. Describe either (1) Peaucellier's accurate parallel motion, or (2) Watt's parallel motion.

4. Describe any form of registering machine suitable for registering consecutive numbers.

5. Describe how the teeth of change wheels are accurately drawn. What is meant by the tooth of a wheel?

6. Describe a four-way cock, and any use it can be put to.

7. Describe, with drawings, the chronometer escapement of a watch.

8. What is meant by a gravity escapement in a clock? What are its advantages?

9. Shew how to design a pair of bevil wheels which shall cause two shafts whose directions meet in a point to revolve with a given velocity ratio.

10. Give a set of wheels which with a leading screw of 2 to the inch will enable a screw of 35 to the inch to be cut, and give a sketch of how they are placed on the lathe.

11. What is meant by a Quick Return?

Describe any form of quick return suitable for a shaping machine.

12. Describe the improvements made in Newcomen's steam-engine by Watt.

SECOND SPECIAL EXAMINATION IN NATURAL SCIENCES FOR THE ORDINARY B.A. DEGREE.

FRIDAY, *November* 30, 1883. 9—12.

BOTANY. I.

1. WHAT are the chief differences of structure visible in the walls of the various kinds of vegetable cells? To what causes may these differences be ascribed?

Give Nägeli's theory of the molecular structure of the cell-wall.

2. Distinguish between cell-colonies, cell-families, cell-tissues, and cell-fusions. In all cases give examples.

Trace the successive steps in the process of cell-fusion from the simple union of two cells (conjugation) to the complete formation of wood-vessels (tracheæ).

3. Describe the structure and development of a typical dicotyledenous fibro-vascular bundle.

4. Mention the principal forms which the Gynæcium assumes in Gymnospermous and Angiospermous plants respectively. What is the relation of the ovule to the carpel in Cycas, in Taxus, and in the Angiospermæ?

Describe the minute structure of an ordinary anatropous ovule (*e.g.* of Viola tricolor).

5. Describe the process of fertilization, and the formation of the embryo (1) in Gymnospermæ, (2) in Angiospermæ.

6. Give an account of the different methods of reproduction in those Thallophytes in which no sexual organs have, as yet, been proved to exist.

7. What are the conditions necessary for the due respiration of plants? Name the principal circumstances which modify the amount of respiration. Mention plants to which the name Anaërobia has been given.

FRIDAY, *November* 30, 1883. 9—12.

GEOLOGY. I.

1. WHAT is meant by derivative rocks? describe generally the several ways in which they are formed.

Give an account of the character and origin of Gritstone, Sandstone, Conglomerate.

2. What are the special characters of shallow water deposits?

3. Give some account of the formation of coral islands.

4. Describe the several agencies which have tended to transform the ancient deposits into solid rock.

5. Give some account of the action of glaciers and icebergs respectively in altering the character of the earth's surface.

6. What evidence is there of alteration of climate during Geological period?

7. Give an explanation of the processes of foliation, contortion, inversion.

FRIDAY, *November* 30, 1883. 9—12.

CHEMISTRY. I.

1. WHAT is meant by the 'tension of a vapour'? How may such tension be determined in any particular case?

What would be the result of introducing successive small quantities of ether into the vacuum of a mercurial barometer? Explain these results.

2. Describe experiments which show that (i) different bodies absorb varying quantities of the same radiant energy, and that (ii) bodies are especially opaque to that kind of energy which they themselves most readily emit when heated.

3. Describe a weight thermometer, explaining the principles on which its action depends, the process of graduating it, and the mode of using it for the comparison of different temperatures.

4. What are the various sources of energy available on the earth, and to what ultimate source may they all be reduced?

What is meant by the expression 'conservation of energy,' and how do we arrive at an idea of the existence of such a principle?

5. Describe all the changes which may result from the application of a gradually increasing heat to bodies. How would such changes be affected by a simultaneous alteration of the surrounding pressure?

Describe particular cases to illustrate your answer.

6. 10 grms. of Zinc are dissolved in Hydrochloric acid. What weight of Chlorate of Potash would be required to yield sufficient Oxygen to form water by uniting with the Hydrogen evolved during the solution of the Zinc?

What weight of water would be formed?

$Zn = 64{\cdot}9$, $H = 1$, $Cl = 35{\cdot}5$, $K = 39{\cdot}1$, $O = 16$,
1 litre of Hydrogen = ·0896 grm.

FRIDAY, *November* 30, 1883. 9—12.

ZOOLOGY. I.

1. DESCRIBE the origin and distribution of the cranial nerves of a fish.

In what points does the arrangement you describe differ from that found in a mammal?

2. Define carefully the meaning of the words homology and analogy as used in Zoology.

Give two instances of the proper use of these terms.

3. Give a brief account of the anatomy of Ascidia.

4. What relation does the living fauna of any region of distribution bear to the fauna of the most recent deposits? How do you account for the facts you mention?

5. Give a brief account of the structure and segmentation of the ovum in the chick.

6. Describe the organs of circulation in Blatta, Anodon, and Perca.

FRIDAY, *November* 30, 1883. 2—5.

BOTANY. II.

1. DESCRIBE in correct botanical language the specimens A, B and C.

Refer them to their Natural Orders, giving your reasons.

2. Identify and describe the microscopical specimens D, E and F. Draw diagrams in illustration of your descriptions.

3. Give full descriptions of the structures G, H and K.

4. Name and describe the fruits L and M.

FRIDAY, *November* 30, 1883. 2—5.

GEOLOGY. II.

1. DESCRIBE briefly the rocks of the upper and lower cretaceous group.

2. Give an account of the phenomenon called earthquake.

3. Mention some of the chief volcanic rocks and explain their method of formation.

4. What are supposed to be the conditions favourable to metamorphism? Give some examples of the operation of these conditions upon the Sandstones, Limestones.

5. What is the relation of the Oxford and Kimmeridge clays in the neighbourhood of Cambridge?

6. Name and describe the rock specimens A, B, C, &c.

7. Define the terms: outcrop, anticlinal axis, synclinal axis, strike, cleavage, fault.

FRIDAY, *November* 30, 1883. 2—5.

CHEMISTRY.

1. GIVE several examples including that of the atmosphere to show the difference between a chemical compound and a mechanical mixture.

2. How would you prove, by combustion with oxygen, that olefiant gas contains twice as much carbon as marsh gas?

3. Calculate the weight of the products which result from passing two litres of steam over red hot iron filings.

4. Give the formulæ for the several acids that may be made with phosphorus. Give their chemical characters and their distinguishing tests.

5. Compare silicon, boron and carbon. How may pure silicon be obtained?

6. Describe with symbols the method of preparing nitric acid, sulphuric acid, and chloric acid respectively.

7. What are the chief natural combinations of magnesium and zinc? Compare the two metals together, and describe the methods of preparing them in a pure state.

FRIDAY, *November* 30, 1883. 2—5.

ZOOLOGY. II.

1. GIVE a brief comparative account of the method in which Oxygen is carried from the external medium to the living protoplasm in Blatta and any pulmonate Vertebrate.

2. What is meant by the term "discontinuous distribution"? Mention any instance of it. How do you account for it?

3. Mention the characteristic features which distinguish the Mammalia from other Vertebrata. Which do you consider to be the most primitive class of the Mammalia (mentioning the primitive features)? Where is this group found?

4. Give a brief account of the development and fate of the structures known as visceral clefts in the embryo chick. How do you account for the presence of these structures in the chick?

5. What are the essential characteristics of the group Arthropoda? Point out in detail how an Arthropod differs (1) from an Annelid, (2) from a Mollusc.

6. Draw and briefly describe the specimens A, B, C.

SATURDAY, *December* 1, 1883. 9—12.

BOTANY. III.

1. OMNIS cellula e cellula. Criticize this statement.

Describe the processes known as, Rejuvenescence of cells, cell-division, and free cell-formation. Give examples.

2. Trace the course of the fibro-vascular bundles in the leaves of plants. What is the relation of the vascular system of the leaf to that of the stem?

Draw diagrams to illustrate the chief types of distribution of the vascular tissue in the stems of Vasculares.

3. Describe the simpler forms of Thallus met with in the Thallophyta. What are the principal ways in which a Thallus may branch?

Trace the successive steps of differentiation by which stem-like, leaf-like, and root-like organs are produced by a Thallus.

4. Describe the typical structure and arrangement of the parts of an ordinary flower. What are the main points either of internal organization or of external appearance which may be brought forward to prove that the parts of the flower are metamorphosed leaves?

5. Give an account of the method of reproduction in the Archegoniata (Mosses and Ferns).

6. Draw up a table for the classification of phanerogamic plants. Give the characters of the several groups; and mention common examples of each group.

7. What plants derive their nourishment from living or recently dead animal matter? In what respects do such plants agree with parasites and with saprophytes?

What are the structural and physiological peculiarities which enable insectivorous plants to imprison and digest their prey?

SATURDAY, *December* 1, 1883. 9—12.

GEOLOGY. III.

1. NAME the beds of the Oolite in order of succession; describe in detail any two of them, giving the characteristic fossils where they occur.

2. Name the chief fresh-water or estuarine deposits and state the formations in which they occur.

3. From what strata, and at what approximate depth, could a supply of water be obtained at the following places: Great Shelford, Dry Drayton, and Rampton, distant respectively from Cambridge 4 miles South, 5 North-West, and 7 miles North?

4. Name and describe the fossil specimens A, B, C, &c.

5. State the geological value of Testacean and crinoidal remains.

SATURDAY, *December* 1, 1883. 9½—12½.

PRACTICAL CHEMISTRY.

N. B. Write short notes of all the experiments you make, and state exactly the conclusions you draw from the result of each experiment.

1. FIND the base present in A and B.

2. A′ and B′ are simple salts in solution. Determine the acid and the base in each.

3. Examine D in the *dry* way only.

SATURDAY, *December* 1, 1883. 9—12.

ZOOLOGY. III.

1. WHAT is meant by intracellular digestion?

Mention any animals in which this process is found.

2. Give a brief comparative account of the skeleton of the fore-limb of Rana, Testudo, Columba.

3. Give a brief account of the anatomy of Actinia or any other Actinozoon. Point out the important features (histological and others) in which the form you describe differs from Hydra.

4. What groups of animals are included under the term Ichthyopsida? Mention the most important features of anatomy in which the Ichthyopsida differ from the higher Vertebrata.

5. Describe briefly the structure of the eye of Homarus, Sepia or any other Cephalopod and of a Vertebrate, pointing out the essential differences between them.

6. Name the specimens I, II, III, giving in each case the grounds for your determination.

FIRST EXAMINATION FOR M.B. DEGREE.

MONDAY, *December* 17, 1883. 9—11½.

MECHANICS AND HYDROSTATICS.

1. How would you distinguish between a solid and a fluid? What is the nature of the stress which can be communicated through a perfect fluid? What is meant by the compressibility of a fluid?

2. Define the terms *acceleration, momentum, force, energy, horse-power.* What do you understand by the hydrostatic pressure *at a point?*

3. What is the *surface tension* of a liquid?

Describe an experiment which enables us to calculate the surface tension of water per unit of length. How could you shew experimentally that the surface tension of water is diminished by the addition of alcohol?

4. What is meant by the phrase "the acceleration of gravity"? Distinguish between the mass of a body and its weight; and shew how the weight of a body may be determined in absolute units of force.

5. Assuming the "triangle of forces" shew how to find the resultant of any number of forces acting on a particle.

Find the condition for the equilibrium of a particle supported on a smooth inclined plane by a horizontal force.

6. What conditions must be fulfilled for a body to float in equilibrium in a heavy fluid?

A body floats in water with its highest point just below the surface. If the body is plunged to a great depth below the surface what condition determines whether it will rise or sink when left to itself?

7. Describe the arrangement of the valves in a force pump.

It is required to make a force pump by attaching two tubes to a hollow india-rubber ball. How would you arrange the valves?

MONDAY, *December* 17, 1883. 1.30—4 P.M.

BOTANY.

1. ENUMERATE the forms in which (*a*) non-nitrogenous and (*b*) nitrogenous organic reserve-materials are stored up by plants. Mention the organs which most usually serve as depositories for these materials; and briefly describe, with examples, any special modification which these organs may exhibit.

2. Describe the structure of a root as seen in transverse section. In what respects does the arrangement of the vascular tissue in a root differ from that in the stems of Dicotyledons and of Monocotyledons?

3. Describe the general structure of the antheridia and archegonia (including their contents) of a Fern. What organ in a Flowering-plant corresponds to the antheridium of a Fern?

4. Distinguish between Cryptogams and Phanerogams, and explain in what way the most important difference between them is produced.

5. Give an account of the uses of the fibrovascular tissue in plants, illustrating your remarks by reference to experiments.

6. Enumerate, with examples, the different members of plants which become modified into tendrils. Briefly describe the mechanism of the coiling of a tendril round a support.

7. Describe in technical language the specimens A and B: draw the floral diagram of A, and refer it to its Natural Order.

TUESDAY, *December* 18, 1883. 9½—12½.

CHEMISTRY.

1. ARRANGE the following substances as mixtures or compounds, giving definite reasons in each case:—*pure chalk, lime, mortar, common salt, sand, cane sugar.*

2. State the qualitative and quantitative laws which regulate the combinations of elements to form compounds, apart from any theory as to the structure of matter. Illustrate these laws by considering the following compounds:—(1) the two oxides of carbon, (2) nitrous and nitric oxides, and nitrogen dioxide (sometimes called nitric peroxide).

3. Clearly distinguish, and give examples of, the meanings of the following expressions:—*the molecular weight of an element; the atomic weight of an element; the combining weight, or equivalent, of an element.*

4. State general methods for preparing oxides so far as such methods are exhibited by the preparation of (1) the two oxides of carbon, (2) the two oxides of sulphur, (3) the oxides of lead.

5. Describe the principal allotropic forms of phosphorus. Give a clear account of the explanation of allotropy obtained by applying the atomic theory to the data furnished by oxygen and ozone.

6. Three litres of carbon dioxide (measured at 0° and 760 mm.) are passed over hot carbon:

(1) how many litres of carbon monoxide are obtained (measured at 5° and 750 mm.)?

(2) how many grams of carbon are used in the process?

(3) how many grams of oxygen would be required in order completely to burn the whole of the carbon monoxide formed in the process?

[C = 12, O = 16: 1 litre H (0° and 760 mm.) weighs ·08936 grams.]

7. Give a short account of the methods of preparation and properties of the metals, their oxides and chlorides, belonging to *one* of the following groups:—(1) chromium and iron, *or* (2) copper and mercury, *or* (3) arsenic and antimony.

8. Show by the examples of ethylic alcohol and ethylic ether the general relations which exist between a monohydric alcohol and its ether; and describe reactions which establish analogies between alcohols and metallic hydroxides on one hand, and ethers and metallic oxides on the other.

9. State any reaction whereby (1) a monobasic carbon-acid can be obtained from a paraffin, the molecule of which contains one atom of carbon less than the acid; (2) a monobasic carbon-acid can be converted into the corresponding amide. Give one example of each process.

10. How is lactic acid related to the acid of the acetic series which contains the same number of carbon atoms in the molecule? State actually occurring reactions to illustrate your answer.

WEDNESDAY, *December* 19, 1883. 9½—12½.

HEAT, ELECTRICITY, AND OPTICS.

1. MAKE a careful drawing of the paths of rays of light passing into air from a luminous point beneath the surface of still water. Shew where the image will appear to an eye placed vertically above the point.

2. Shew how to find the position and magnitude of the image of a given object formed by a concave mirror and determine the relation between the size of the image and that of the object.

3. Trace the path of a pencil of rays from a distant object through a concave lens, and hence explain the use of such lenses in the case of short sight.

4. Distinguish between temperature and heat. Why is mercury usually selected as the thermometric substance?

5. Distinguish between the absolute and the apparent expansion of a liquid. How may the coefficient of absolute expansion of mercury be determined?

6. State Dalton's laws of evaporation. Distinguish between saturated and unsaturated vapours. What is the effect of continuing to compress unsaturated (or super-heated) steam, (i) when its temperature is kept constant, (ii) when no heat is allowed to enter or leave it?

7. Describe some form of calorimeter for measuring the specific heat of a substance of which only a small quantity is available, and state the principal precautions necessary in order to secure an accurate result.

8. Describe some method of comparing the thermal conductivities of different metals. Why cannot we obtain an accurate comparison by observing the *time* required to heat the distant ends of the bars to a given temperature?

9. Define the *potential* of a point and the *capacity* of a conductor. Describe an experiment which shews that a body may have a negative charge and a positive potential.

10. What is the relation between the current, the resistance, and the rate at which heat is produced in a wire? What must be the diameter of a wire in which a current of 10 ampères generates the same amount of heat as is produced by a current of 1000 ampères in a wire of the same length but one inch in diameter?

11. Describe the Bichromate or the Leclanché cell (but not both). Is either of these batteries *constant?* Explain why the action of the Bichromate cell is improved by blowing air through the solution while the current is flowing.

12. Describe some apparatus suitable for the production of a current by the motion of a conductor in a magnetic field. On what does the strength of the current depend?

THURSDAY, *December* 20, 1883. 9—12 noon *or* 1½—4½ P.M.

PRACTICAL CHEMISTRY.

[*State clearly in writing each experiment performed and the inference drawn from the result of each experiment. No credit will be given for a statement of what is found in the substances, unless the experimental evidence and the reasonings thereupon are distinctly given.*]

1. A is a simple salt: find the metal and acid.

2. B contains not more than three metals, all in different groups.

3. C is a substance to be examined by dry tests only.

SECOND EXAMINATION FOR M.B. DEGREE.

THURSDAY, *December* 13, 1883. 9 A.M.—12 M.

PHYSIOLOGY.

1. WHAT are the constituents of milk? Describe carefully the processes of digestion and absorption of milk.

2. Upon what influences does the pressure of blood in the arteries depend? Explain the variations of arterial blood-pressure caused by the action of the respiration.

3. Describe the formation of fat in the body. Discuss the respective values of proteid, carbo-hydrate and fatty foods for the formation of fat.

4. Give the normal constitution of urine. Give the evidence as to the share taken by the different portions of the kidney in the elimination of the urinary constituents. Under what conditions can albumen be made to appear in the urine?

5. What are the factors upon which coagulation of the blood depends? Give the evidence for their existence. What is the effect upon the blood of injecting into the veins of an animal (1) a solution of peptone, (2) the washings of a blood-clot?

6. Describe the mechanism by which the vibrations of sound are transmitted to the auditory nerve, and discuss the manner in which auditory sensations arise.

THURSDAY, *Dec.* 13, 1883. 2 to 4 P.M.

PHARMACY.

1. WHAT is the relation between the English Grain and the French Gramme? What between the English Pint and the French Litre?

2. Describe Ergot: its source, physiological effects and Pharmacopæial preparations.

Is there any objection to prescribing it in combination with Acetate of Lead or Tincture of Galls?

3. Give an account of the action of Strychnia upon a healthy person. From what plant is it obtained? What other officinal preparations are derived from the same plant?

4. What is Opium? Describe generally its constitution and most important constituents.

Tinctura Opii is of uncertain power when made with the ordinary Opium of commerce. What explanation can you give of this?

5. Sulphate of Quinine is sometimes adulterated with earthy phosphates, chalk, starch or sugar. How would you detect these adulterations?

6. What are the ingredients respectively in:

Pilula Conii Comp.	Pulvis Rhei Comp.
Pilula Saponis Comp.	Pulvis Ipecacuanhæ Comp.
Pulvis Glycyrrhizæ Comp.	Tinctura Camphoræ Comp.
Pulvis Kino Comp.	Mixtura Sennæ Comp.?

FRIDAY, *December* 14, 1883. 9 A.M.

HUMAN ANATOMY.

1. DESCRIBE the structures which enter into the formation of the soft palate, giving the attachments, innervation, and actions of the muscles connected therewith.

2. What are the relative positions and connexions of the nuclei from which the fourth, sixth, auditory, facial, vagus and hypoglossal nerves arise?

3. Describe the position, and the vascular and peritoneal relations of the stomach, mentioning how these are affected by varying conditions of distension.

4. Give the position, relations and distribution of the Internal Iliac Artery and its branches. State how these differ in the fœtus from their adult condition.

5. What are Peyer's glands? Describe their minute structure and distribution. Where in the body do similar structures occur?

6. Give the attachments of the diaphragm and enumerate the parts which traverse its several openings. Specify accurately the alterations which take place in the levels of its several parts in the different acts of respiration and how these differ in the two sexes.

FRIDAY, *December* 14, 1883. 2 to 4 P.M.

COMPARATIVE ANATOMY.

1. GIVE a general account, illustrated by examples, of the structure and of the modes of reproduction of the *Protozoa*. Compare the process of fission in a Protozoon with the segmentation of the egg in higher animals.

2. Draw and describe transverse sections through a Tape-worm, a Leech, and an Earth-worm. What structural peculiarities in the Tape-worm do you consider to be due to its parasitic habits?

3. Give an account of the leading modifications presented by the nervous system among Invertebrates; and state which of these forms you consider approaches most closely to the Vertebrate nervous system.

4. Compare with one another, illustrating your answer by diagrammatic figures, the bones of the fore and hind limbs of a Pigeon, a Sheep, and a Man. Upon what grounds is it assumed that the Snake and Whale are forms which have lost their limbs rather than forms which have never had them?

SATURDAY, *December* 15, 1883. 9 A.M.—1 P.M.

PRACTICAL PHYSIOLOGY.

1. DESCRIBE the nature and characteristics of the preparations *A*, *B*, *C*, *D*, illustrating your description by means of sketches.

2. Make a preparation of the imbedded specimen *E*, and describe carefully its main characteristics.

3. Prepare and mount the specimen *F*, and state its nature.

4. Make preparations to demonstrate the structure of unstriped and cardiac muscle fibres.

5. Determine the chief constituents of milk. (Write out carefully each successive step in your analysis with the result, giving your reasons for your procedure in each case.)

THIRD EXAMINATION FOR M.B. DEGREE.

FIRST PART.

THURSDAY, *December* 13, 1883. 9—11.30 A.M.

OBSTETRIC MEDICINE.

1. WHAT is the source of the propelling power in labour, and what is its amount? How may its deficiency be remedied by the practitioner in a case otherwise natural?

2. State and contrast the mechanism of the expulsion (over the perinæum only) of the head (1) in an ordinary left occipito-anterior position, and (2) in a left mento-anterior position.

3. How, in a puerperal woman, would you distinguish sapræmia (putrid intoxication) from septicæmia? How would you treat the former of these conditions?

4. Describe the spontaneous enucleation of a uterine fibroid, and state in what cases and by what proceedings it may be imitated in practice. In your answer mention the conditions in which the practitioner finds the process easy and those in which he finds it difficult.

THURSDAY, *Dec.* 13, 1883. 2 to 5 P.M.

PRINCIPLES OF SURGERY.

1. STATE what you know of the process of union by first intention, as for example after an operation for hare lip.

2. What is a carbuncle? Describe the ordinary course of the disease, and the modes in which it is dangerous to life.

3. Describe the causes which may lead to aneurism, and the manner in which they give rise to the disease.

4. Define a sinus, and state the various causes which may originate or maintain this affection.

5. Mention any circumstances which may interfere with osseous union of a fractured bone, and state in what situations want of union is most frequently met with.

6. Explain the natural processes by which hæmorrhage is arrested in a lacerated wound.

SECOND PART.

MONDAY, *December* 17, 1883. 2 to 5 P.M.

PATHOLOGY AND PRACTICE OF PHYSIC. I.

1. DESCRIBE a case of Variola Confluens, and mention the circumstances which have to be considered in forming a prognosis.

2. What effects may be produced by an aneurysm of the Thoracic Aorta? What is the nature of the lesion? How may it affect the Sphygmographic tracing?

3. Describe a well-marked case of Graves' disease, its morbid anatomy, and probable pathology.

4. Explain the term "reaction of degeneration." What changes take place in muscle and motor nerve when the latter is seriously diseased or injured?

5. What are the principal points to which attention should be directed in the construction of a dwelling-house, in order to render it as healthy as possible?

6. What symptoms would enable you to recognize a case of Pneumothorax? What lesions would be found on dissection?

TUESDAY, *December* 18, 1883. 2 to 5 P.M.

PATHOLOGY AND PRACTICE OF PHYSIC. II.

1. GIVE a short clinical description of Pseudo-hypertrophic paralysis. Describe in their order the several degenerative changes of the structures involved.

2. In what morbid conditions, other than acute rheumatism, is pericarditis met with? What are the *earliest* physical signs of effusion within the pericardial sac; and in what conditions may these signs be concealed or modified?

3. State the main arguments for and against the identity of croup and diphtheria, giving your own conclusions upon the subject with the facts on which they are based.

4. Distinguish between hæmaturia and hæmatinuria (hæmoglobinuria). Give a short sketch of the latter affection, including its varieties, provocatives and microscopic characters of urine.

5. Describe the clinical features of ulcer of the stomach, show how it is to be distinguished from the diseases that resemble it, and give the general principles on which it should be treated.

6. Describe pemphigus, and mention the diseases it may resemble in its later stages.

WEDNESDAY, *Dec.* 19, 1883. 2.30 to 4.30 P.M.

MEDICAL JURISPRUDENCE.

1. How would you distinguish feigned from real mania?

2. How would you determine that red stains found on clothes were produced by blood, and not by other agents? Mention some of the latter.

3. What are the symptoms and post-mortem appearances in cases of poisoning by carbonic acid?

What restorative treatment should be employed?

4. Discuss the value of the hydrostatic test as a proof of live birth.

5. What is "the Wool-sorter's Disease"?

From what disease of animals is it supposed to derive its origin? Give some general account of this disease of animals, and describe particularly the means that have been devised for its prevention.

THURSDAY, *December* 20, 1883. 9 A.M.

I. WRITE prescriptions:—

1. For treatment of acute extensive Eczema in (1) a fairly robust person, and (2) a weakly person; including external treatment.

2. For an astringent mixture suitable for an infant, 8 months old, suffering from Diarrhœa.

3. For an emetic (i) in case of poisoning with toadstool; and (ii) in case of severe Bronchitis.

II. Set down the respective doses for adults, and for infants of one year old, of the following drugs:

Pulv. Cretæ aromat. cum Opio.	Bismuthi Subnitras.
Pulv. Kino comp.	Tincture of Belladonna (for Whooping Cough).
Chloral hydrate.	Hydrargyrum cum Creta.

SECOND SPECIAL EXAMINATION IN THEOLOGY FOR THE ORDINARY B.A. DEGREE.

FRIDAY, *November* 30, 1883. 9—12.

(A) THE EPISTLE TO THE PHILIPPIANS.

1. GIVE St Paul's teaching in this Epistle on Judaising and Antinomian tendencies, showing in what relation the passage containing this teaching stands to the rest of the Epistle. What are the characteristics of this Epistle as compared with the other Epistles of the Captivity?

2. Describe briefly the geographical position and the political status of Philippi, and the circumstances attending St Paul's first visit to it. How are these alluded to in this Epistle?

3. Translate:

Παῦλος καὶ Τιμόθεος, δοῦλοι Χριστοῦ Ἰησοῦ, πᾶσιν τοῖς ἁγίοις ἐν Χριστῷ Ἰησοῦ τοῖς οὖσιν ἐν Φιλίπποις σὺν ἐπισκόποις καὶ διακόνοις.

What inference can be drawn from this and other passages in the New Testament as to the comprehensiveness of the primitive Church and as to the Orders of Ministers within it?

4. Translate, with notes on the words and phrases between asterisks only:

(*a*) *καὶ τοῦτο προσεύχομαι, ἵνα ἡ ἀγάπη ὑμῶν ἔτι μᾶλλον καὶ μᾶλλον περισσεύῃ ἐν *ἐπιγνώσει καὶ πάσῃ αἰσθήσει,* εἰς τὸ δοκιμάζειν ὑμᾶς τὰ *διαφέροντα,* ἵνα ἦτε εἰλικρινεῖς καὶ ἀπρόσκοποι εἰς ἡμέραν Χριστοῦ, *πεπληρωμένοι καρπὸν δικαιοσύνης* τὸν διὰ Ἰησοῦ Χριστοῦ εἰς δόξαν καὶ ἔπαινον Θεοῦ.*

Explain clearly *εἰλικρινεῖς* and *ἀπρόσκοποι.*

(*b*) *πάντα ποιεῖτε χωρὶς γογγυσμῶν καὶ διαλογισμῶν, ἵνα γένησθε ἄμεμπτοι καὶ ἀκέραιοι, τέκνα Θεοῦ ἄμωμα μέσον γενεᾶς σκολιᾶς καὶ διεστραμμένης, ἐν οἷς φαίνεσθε ὡς φωστῆρες ἐν κόσμῳ, λόγον ζωῆς ἐπέχοντες, εἰς καύχημα ἐμοὶ *εἰς ἡμέραν Χριστοῦ,* ὅτι οὐκ εἰς κενὸν ἔδραμον οὐδὲ εἰς κενὸν ἐκοπίασα.*

Explain the synonyms in the above, and the allusion to the Old Testament.

(*c*) **Χαίρετε* ἐν Κυρίῳ πάντοτε· πάλιν ἐρῶ, χαίρετε. *τὸ ἐπιεικὲς ὑμῶν* γνωσθήτω πᾶσιν ἀνθρώποις. *ὁ Κύριος ἐγγύς*. μηδὲν μεριμνᾶτε, ἀλλ' ἐν παντὶ τῇ *προσευχῇ καὶ τῇ δεήσει* μετ' εὐχαριστίας τὰ αἰτήματα ὑμῶν γνωριζέσθω πρὸς τὸν Θεόν. καὶ ἡ εἰρήνη τοῦ Θεοῦ ἡ ὑπερέχουσα πάντα νοῦν φρουρήσει*

τὰς καρδίας ὑμῶν καὶ τὰ νοήματα ὑμῶν ἐν Χριστῷ Ἰησοῦ. Τὸ λοιπόν, ἀδελφοί, ὅσα ἐστὶν ἀληθῆ, ὅσα σεμνά, ὅσα δίκαια, ὅσα ἁγνά, ὅσα προσφιλῆ, ὅσα εὔφημα, εἴ τις ἀρετὴ καὶ εἴ τις ἔπαινος, ταῦτα λογίζεσθε.

Explain each of the adjectives and substantives in the last sentence.

5. Translate and explain, giving the substance of the context in each case:

(*a*) καὶ μὴ πτυρόμενοι ἐν μηδενὶ ὑπὸ τῶν ἀντικειμένων· ἥτις ἐστὶν αὐτοῖς ἔνδειξις ἀπωλείας, ὑμῶν δὲ σωτηρίας, καὶ τοῦτο ἀπὸ Θεοῦ.

(*b*) Ὥστε, ἀγαπητοί μου, καθὼς πάντοτε ὑπηκούσατε, μὴ ὡς ἐν τῇ παρουσίᾳ μου μόνον, ἀλλὰ νῦν πολλῷ μᾶλλον ἐν τῇ ἀπουσίᾳ μου, μετὰ φόβου καὶ τρόμου τὴν ἑαυτῶν σωτηρίαν κατεργάζεσθε· Θεὸς γάρ ἐστιν ὁ ἐνεργῶν ἐν ὑμῖν καὶ τὸ θέλειν καὶ τὸ ἐνεργεῖν ὑπὲρ τῆς εὐδοκίας.

Paraphrase this so as to bring out the implied teaching on Faith and Works and Grace and Freewill.

(*c*) ἀλλὰ εἰ καὶ σπένδομαι ἐπὶ τῇ θυσίᾳ καὶ λειτουργίᾳ τῆς πίστεως ὑμῶν, χαίρω καὶ συγχαίρω πᾶσιν ὑμῖν.

(*d*) εἴ πως καταντήσω εἰς τὴν ἐξανάστασιν τὴν ἐκ νεκρῶν.

6. Explain the following words and phrases (with special reference to their meaning in the passages in which they occur):

πολιτεύεσθε—συναθλοῦντες τῇ πίστει—ἀγῶνα—συμμορφιζόμενος τῷ θανάτῳ αὐτοῦ—ἀποκαραδοκίαν—κατ' ἐριθείαν καὶ κενοδοξίαν—εἰς λόγον δόσεως καὶ λήμψεως—ἅπαξ καὶ δίς—συνκοινωνήσαντές μου τῇ θλίψει—οἱ ἐκ τῆς Καίσαρος οἰκίας.

Illustrate the last phrase from any other Epistle of St Paul.

7. Retranslate into Greek:

(*a*) Let us therefore, as many as be perfect, be thus minded: and if in anything ye are otherwise minded, even this shall God reveal unto you: only, whereunto we have already attained, by that same rule let us walk.

(*b*) Yea, I beseech thee also, true yokefellow, help these women, for they laboured with me in the gospel, with Clement also, and the rest of my fellow-workers, whose names are in the book of life.

(B) THE FIRST EPISTLE OF ST PETER.

1. GIVE any parallels which occur in this Epistle to St Peter's speeches in the Acts of the Apostles.

2. Discuss the indications which the Epistle affords as to the place and date of its writing.

3. Give the substance of St Peter's precepts to Servants.

4. Translate, with comments upon the words and phrases between asterisks only:

Πρεσβυτέρους οὖν ἐν ὑμῖν παρακαλῶ ὁ συνπρεσβύτερος καὶ μάρτυς τῶν τοῦ Χριστοῦ παθημάτων, ὁ καὶ τῆς μελλούσης ἀποκαλύπτεσθαι δόξης κοινωνός, ποιμάνατε τὸ ἐν ὑμῖν ποίμνιον τοῦ θεοῦ, μὴ *ἀναγκαστῶς* ἀλλὰ ἑκουσίως, μηδὲ αἰσχροκερδῶς ἀλλὰ προθύμως, μηδ' ὡς κατακυριεύοντες τῶν *κλήρων* ἀλλὰ τύποι γινόμενοι τοῦ ποιμνίου· καὶ φανερωθέντος τοῦ ἀρχιποίμενος κομιεῖσθε τὸν ἀμαράντινον τῆς δόξης στέφανον. Ὁμοίως, *νεώτεροι*, ὑποτάγητε πρεσβυτέροις. Πάντες δὲ ἀλλήλοις *τὴν ταπεινοφροσύνην ἐγκομβώσασθε*, ὅτι ὁ θεὸς ὑπερηφάνοις ἀντιτάσσεται ταπεινοῖς δὲ δίδωσιν χάριν.

5. Translate and explain the following passages:

(*a*) ἐν ᾧ ἀγαλλιᾶσθε, ὀλίγον ἄρτι εἰ δέον λυπηθέντες ἐν ποικίλοις πειρασμοῖς, ἵνα τὸ δοκίμιον ὑμῶν τῆς πίστεως πολυτιμότερον χρυσίου τοῦ ἀπολλυμένου διὰ πυρὸς δὲ δοκιμαζομένου εὑρεθῇ εἰς ἔπαινον καὶ δόξαν καὶ τιμὴν ἐν ἀποκαλύψει Ἰησοῦ Χριστοῦ.

(*b*) ὡς ἀρτιγέννητα βρέφη τὸ λογικὸν ἄδολον γάλα ἐπιποθήσατε, ἵνα ἐν αὐτῷ αὐξηθῆτε εἰς σωτηρίαν.

(*c*) ὡς Σάῤῥα ὑπήκουεν τῷ Ἀβραάμ, κύριον αὐτὸν καλοῦσα· ἧς ἐγενήθητε τέκνα ἀγαθοποιοῦσαι καὶ μὴ φοβούμεναι μηδεμίαν πτόησιν.

(*d*) κατασκευαζομένης κιβωτοῦ εἰς ἣν ὀλίγοι, τοῦτ' ἔστιν ὀκτὼ ψυχαί, διεσώθησαν δι' ὕδατος. ὃ καὶ ὑμᾶς ἀντίτυπον νῦν σώζει βάπτισμα.

(*e*) εἴ τις λαλεῖ, ὡς λόγια θεοῦ· εἴ τις διακονεῖ, ὡς ἐξ ἰσχύος ἧς χορηγεῖ ὁ θεός· ἵνα ἐν πᾶσιν δοξάζηται ὁ θεὸς διὰ Ἰησοῦ Χριστοῦ, ᾧ ἐστὶν ἡ δόξα καὶ τὸ κράτος εἰς τοὺς αἰῶνας τῶν αἰώνων· ἀμήν.

Name any various readings in (*a*) and (*d*), and point out the difference which they make in the sense.

6. Retranslate into Greek;

(*a*) For ye were going astray like sheep; but are now returned unto the Shepherd and Bishop of your souls.

(*b*) Love covereth a multitude of sins.

(*c*) Be sober, be watchful: your adversary the devil, as a roaring lion, walketh about, seeking whom he may devour.

7. Give the source of the following quotation, and discuss its use by St Peter:

οἵ ποτε οὐ λαὸς νῦν δὲ λαὸς θεοῦ, οἱ οὐκ ἠλεημένοι νῦν δὲ ἐλεηθέντες.

Give St Peter's quotations from Isaiah liii.

8. Explain the nature of the assistance which is rendered by quotations in the writings of the Fathers towards determining the text of the New Testament.

FRIDAY, *November* 30, 1883. 2—5.

(A) PSALMS CVII—CL.

1. AT what time and from what sources were these Psalms brought together? What chief collections of Psalms were then already existing?

2. Under what circumstances and at what date were the following Psalms written:

(*a*) Ps. cx. (*The* LORD *said unto my Lord*),

(*b*) Ps. cxxxix. (*O* LORD, *thou hast searched me and known me*)?

Explain the title to Ps. cxlii.: *Maschil of David; a prayer when he was in the cave*, and discuss its authenticity.

3. Paraphrase without notes the following passages, so as to shew fully their meaning:

(*a*) The LORD shall send the rod of thy strength out of Zion: rule thou in the midst of thine enemies. Thy people shall be willing in the day of thy power, in the beauties of holiness from the womb of the morning: thou hast the dew of thy youth. The LORD hath sworn and will not repent, Thou art a priest for ever after the order of Melchizedek.

(*b*) Rid me, and deliver me from the hand of strange children, whose mouth speaketh vanity, and their right hand is a right hand of falsehood: that our sons may be as plants grown up in their youth; that our daughters may be as corner stones, polished after the similitude of a palace.

4. Explain the following passages, referring to the context, and correcting the English rendering where necessary:

(*a*) I will take the cup of salvation, and call upon the name of the LORD.

(*b*) God is the LORD, which hath shewed us light: bind the sacrifice with cords, even unto the horns of the altar.

(*c*) Thou through thy commandments hast made me wiser than mine enemies for they are ever with me.

(*d*) Like as the arrows in the hand of the giant: even so are the young children.

(*e*) Remember, O LORD, the children of Edom in the day of Jerusalem; who said, Rase it, rase it, even to the foundation thereof.

(*f*) Let the saints be joyful in glory: let them sing aloud upon their beds.

5. Discuss the quotations made in the New Testament of the following clauses:

(*a*) O praise the LORD, all ye nations.

(*b*) The stone which the builders refused is become the head-stone of the corner.

What other quotations are made from the Psalm in which the latter occurs?

6. Give any allusions which are made in these Psalms to historical events previous to the time of the Judges.

7. Quote from the Songs of Degrees passages which make for or against the opinion that they are songs of exiles returning from Babylon.

(B) JEREMIAH.

1. WHAT kings of Judah were contemporary with Jeremiah? In what terms does the prophet foretell or lament the end of each?

2. "And Hilkiah the high priest said unto Shaphan the scribe, I have found: the book of the law in the house of the LORD." (II Kings xxii. 8.) When was this discovery made, and what traces of its effect are to be found in the writings of Jeremiah?

3. Collect the passages which bear upon the Messiah in this book, and shew that Jeremiah was specially the Prophet of the New Covenant.

4. What events in secular history were the immediate cause of the destruction of Jerusalem? How are they alluded to by Jeremiah?

5. Explain the significance of Jeremiah's visit to the Euphrates, and of the visions of the Almond Tree and of the Seething Pot. Narrate the circumstances of the purchase of the field at Anathoth.

6. Write a short account of the events recorded in this book which happened after the destruction of the City.

7. Write a short notice of Hilkiah—Nebuchadrezzar—Baruch—Magor-missabib—Gemariah—Rab-mag—The gate betwixt the two walls—The Queen of Heaven—The king of Sheshach—Tophet.

8. Explain the following passages by reference to the context:

(*a*) Is Israel a servant? is he a homeborn slave?

(*b*) I have likened the daughter of Sion to a tender and delicate woman.

(*c*) All that are in the utmost corners.

(*d*) How wilt thou do in the swelling of Jordan?

(*e*) Zion shall be ploughed like a field, and Jerusalem shall become heaps, and the mountain of the house as the high places of a forest.

(*f*) Jonadab the son of Rechab shall not want a man to stand before me for ever.

(*g*) Is wisdom no more in Teman?

(*h*) And this Seraiah was a quiet prince.

SATURDAY, *December* 1, 1883. 9—12.

[*Answers to the Outlines and the Selected Period are to be sent up separately. Candidates are required to satisfy the Examiners in both subjects.*]

(A) OUTLINES OF ENGLISH CHURCH HISTORY.

[*Not more than* three *questions in each of the divisions I. II. III. of* (*A*) *are to be attempted.*]

I.

1. WHAT knowledge do we possess of the history of the Church in Britain before the coming of St Augustine? What celebrated men had it produced?

2. Shew by illustrations, (*a*) of literary activity, (*b*) of Missionary successes, the condition of the English Church in the eighth century.

3. Give a brief account of the life and labours of St Dunstan. What is your estimate of his character?

4. Describe the policy of Pope Gregory VII towards England. How did William the Conqueror treat his pretensions?

5. Write a short biographical note on *four* of the following: Theodore of Tarsus —Columban—Alcuin—Odo Severus—Stigand—Odo of Bayeux—Lanfranc.

II.

1. IN what way was the influence of the Crusades felt in the ecclesiastical and political development of England?

2. State briefly the principles involved in the disputes between Henry I and Anselm, and Henry II and Becket respectively.

3. What were the chief monastic orders in England? Who were the Friars, and what was their influence on the Church for good and for evil?

4. Write a short sketch of the career of Wycliffe, estimating his character as a reformer. By what means were his principles extended to the Continent?

5. Give short accounts of *four* of the following: Adrian IV.—Stephen Langton—Grosseteste—Roger Bacon—Duns Scotus—Bishop Pecock—Sir John Oldcastle.

III.

1. GIVE an account of the ecclesiastical measures passed at the beginning of the reign of Elizabeth. What was the cause of the Brownist schism?

2. Discuss the measures passed by the Assembly of Divines at Westminster. How were the several religious parties in England represented there?

3. By what acts did James II lose the affections of English Churchmen? Discuss the effects of the Revolution on the Church, and the position assumed by the Non-Juring Clergy.

4. Write a brief life of Wesley. What results have his labours had on religious life in England?

5. Write a note on *four* of the following: The Smectymnuian Controversy—The Five-mile Act—The Toleration Act—Occasional Conformity—The *Letter to a Convocation Man*—The Bangorian Controversy.

(B) LIFE AND TIMES OF LATIMER.

1. SKETCH briefly some features of university life at the commencement of the Reformation, mentioning the most noteworthy men then at Cambridge.

2. Give an account of Wolsey, contrasting his policy towards the Reformation with that of Sir Thomas More.

3. What circumstances led to Henry VIII's rupture with Rome, and who were his chief advisers at the time?

4. Describe the proceedings of the Convocation of 1536, and give a summary of Latimer's sermon on that occasion.

5. What were the Six Articles? What is known of Latimer's life during the latter years of Henry VIII.?

6. Give the names of the foreign Reformers who were in England during the reign of Edward VI. What consequences of their influence were felt in the English Reformation?

7. Write a short note on Thomas Cromwell—Gardiner—Stokesley—Tonstal—"The Bishops' Book"—"The King's Book."

8. Give your estimate of Latimer (1) as a reformer, (2) as a preacher, illustrating your remarks by reference to the acts of his life and to his sermons.

SATURDAY, *December* 1, 1883. 2—5.

THE GOSPEL ACCORDING TO ST LUKE.

1. How far can we, consistently with a belief in Divine Inspiration, say that each Evangelist had a different aim in writing his Gospel? Illustrate by quotations or references what you consider St Luke's special aim to have been. What bearing has this inquiry on any supposed "common origin" of the Synoptists?

2. Draw out (from St Luke's account) the nature of our Lord's Temptation, and also its lessons for us.

3. Discuss the nature of Demoniac Possession, illustrating the subject from the Gospel narrative.

4. Collect and sum up St Luke's descriptions of, or allusions to, an Intermediate State after death.

5. Give a brief account of the section of this Gospel called "the Journey." How far are the events of this section mentioned or implied by any other of the Evangelists?

6. Translate, with notes on the words and phrases between asterisks only:

(*a*) ἀντελάβετο Ἰσραὴλ *παιδὸς αὐτοῦ,* μνησθῆναι ἐλέους, καθὼς ἐλάλησεν πρὸς τοὺς πατέρας ἡμῶν, τῷ Ἀβραὰμ καὶ τῷ σπέρματι αὐτοῦ εἰς τὸν αἰῶνα.

Explain the grammatical construction. What promise is here referred to? and how was it fulfilled?

(*b*) καὶ ἰδόντες αὐτὸν ἐξεπλάγησαν, καὶ εἶπεν πρὸς αὐτὸν ἡ μήτηρ αὐτοῦ Τέκνον, τί ἐποίησας ἡμῖν οὕτως; ἰδοὺ ὁ πατήρ σου κἀγὼ ὀδυνώμενοι ἐζητοῦμέν σε. καὶ εἶπεν πρὸς αὐτούς Τί ὅτι ἐζητεῖτέ με; οὐκ ἤδειτε ὅτι *ἐν τοῖς τοῦ πατρός μου* δεῖ εἶναί με; καὶ αὐτοὶ οὐ συνῆκαν τὸ ῥῆμα ὃ ἐλάλησεν αὐτοῖς. καὶ κατέβη μετ' αὐτῶν καὶ ἦλθεν εἰς Ναζαρέθ, καὶ ἦν ὑποτασσόμενος αὐτοῖς. καὶ ἡ μήτηρ αὐτοῦ διετήρει πάντα τὰ ῥήματα ἐν τῇ καρδίᾳ αὐτῆς. καὶ Ἰησοῦς *προέκοπτεν* σοφίᾳ καὶ ἡλικίᾳ καὶ χάριτι παρὰ θεῷ καὶ ἀνθρώποις.

How does this last sentence illustrate the union of the two natures in our Lord? What early heresy is refuted by it?

(c) ἐγένετο δὲ ἐν ταῖς ἡμέραις ταύταις ἐξελθεῖν αὐτὸν εἰς τὸ ὄρος προσεύξασθαι, καὶ ἦν διανυκτερεύων *ἐν τῇ προσευχῇ τοῦ θεοῦ*. καὶ ὅτε ἐγένετο ἡμέρα, προσεφώνησεν τοὺς μαθητὰς αὐτοῦ, καὶ ἐκλεξάμενος ἀπ' αὐτῶν δώδεκα, οὓς καὶ *ἀποστόλους* ὠνόμασεν....

What was the cause and the object of the selection of the twelve Apostles?

(d) ἐν αὐτῇ τῇ ἡμέρᾳ προσῆλθόν τινες Φαρισαῖοι λέγοντες αὐτῷ Ἔξελθε καὶ πορεύου ἐντεῦθεν, ὅτι Ἡρώδης θέλει σε ἀποκτεῖναι. καὶ εἶπεν αὐτοῖς Πορευθέντες εἴπατε τῇ ἀλώπεκι ταύτῃ Ἰδοὺ ἐκβάλλω δαιμόνια καὶ ἰάσεις ἀποτελῶ σήμερον καὶ αὔριον, καὶ τῇ τρίτῃ *τελειοῦμαι*. πλὴν δεῖ με σήμερον καὶ αὔριον καὶ τῇ ἐχομένῃ πορεύεσθαι, ὅτι *οὐκ ἐνδέχεται προφήτην ἀπολέσθαι ἔξω Ἱερουσαλήμ*.

What were the probable motives of the Pharisees and of Herod? Explain our Lord's answer in the light of these motives.

(e) Προσέχετε δὲ ἑαυτοῖς μή ποτε βαρηθῶσιν ὑμῶν αἱ καρδίαι ἐν κραιπάλῃ καὶ μέθῃ καὶ μερίμναις βιωτικαῖς, καὶ ἐπιστῇ ἐφ' ὑμᾶς αἰφνίδιος ἡ ἡμέρα ἐκείνη· ὡς παγὶς γὰρ ἐπεισελεύσεται ἐπὶ πάντας τοὺς καθημένους ἐπὶ πρόσωπον πάσης τῆς γῆς.

To what event does this refer?

(f) Καὶ ὅτε ἐγένετο *ἡ ὥρα*, ἀνέπεσεν, καὶ οἱ ἀπόστολοι σὺν αὐτῷ. καὶ εἶπεν πρὸς αὐτούς Ἐπιθυμίᾳ ἐπεθύμησα τοῦτο τὸ πάσχα φαγεῖν μεθ' ὑμῶν πρὸ τοῦ με παθεῖν· λέγω γὰρ ὑμῖν ὅτι οὐκέτι οὐ μὴ φάγω αὐτὸ *ἕως ὅτου πληρωθῇ ἐν τῇ βασιλείᾳ τοῦ θεοῦ*. καὶ δεξάμενος ποτήριον εὐχαριστήσας εἶπεν Λάβετε τοῦτο καὶ διαμερίσατε ἑαυτοῖς· λέγω γὰρ ὑμῖν, οὐ μὴ πίω ἀπὸ τοῦ γενήματος τῆς ἀμπέλου ἕως ὅτου ἡ βασιλεία τοῦ θεοῦ ἔλθῃ.

How far did the Last Supper correspond with Passover usages? Are there any notices in St Luke which tell for or against its being on the day of the Passover?

7. Without translating, explain the following passages, and draw out the argument in them:

(a) ὁ δὲ εἶπεν Ὑμῖν δέδοται γνῶναι τὰ μυστήρια τῆς βασιλείας τοῦ θεοῦ, τοῖς δὲ λοιποῖς ἐν παραβολαῖς, ἵνα βλέποντες μὴ βλέπωσιν καὶ ἀκούοντες μὴ συνιῶσιν.

(b) ὁ νόμος καὶ οἱ προφῆται μέχρι Ἰωάννου· ἀπὸ τότε ἡ βασιλεία τοῦ θεοῦ εὐαγγελίζεται καὶ πᾶς εἰς αὐτὴν βιάζεται. εὐκοπώτερον δέ ἐστιν τὸν οὐρανὸν καὶ τὴν γῆν παρελθεῖν ἢ τοῦ νόμου μίαν κεραίαν πεσεῖν. πᾶς ὁ ἀπολύων τὴν γυναῖκα αὐτοῦ καὶ γαμῶν ἑτέραν μοιχεύει, καὶ ὁ ἀπολελυμένην ἀπὸ ἀνδρὸς γαμῶν μοιχεύει.

What bearing has this passage on Marcion's use of this Gospel?

(c) καὶ εἰ ἐν τῷ ἀλλοτρίῳ πιστοὶ οὐκ ἐγένεσθε, τὸ ὑμέτερον τίς ὑμῖν δώσει;

8. Translate and explain, giving the substance of the context in each case:

(*a*) *καὶ εὐλόγησεν αὐτοὺς Συμεὼν καὶ εἶπεν πρὸς Μαριὰμ τὴν μητέρα αὐτοῦ Ἰδοὺ οὗτος κεῖται εἰς πτῶσιν καὶ ἀνάστασιν πολλῶν ἐν τῷ Ἰσραὴλ καὶ εἰς σημεῖον ἀντιλεγόμενον. καὶ σοῦ δὲ αὐτῆς τὴν ψυχὴν διελεύσεται ῥομφαία, ὅπως ἂν ἀποκαλυφθῶσιν ἐκ πολλῶν καρδιῶν διαλογισμοί.*

How can these words be termed a blessing?

(*b*) *πλὴν τὰ ἐνόντα δότε ἐλεημοσύνην, καὶ ἰδοὺ πάντα καθαρὰ ὑμῖν ἐστίν.*

(*c*) *πῦρ ἦλθον βαλεῖν εἰς τὴν γῆν, καὶ τί θέλω εἰ ἤδη ἀνήφθη;*

(*d*) *ὃς ἐὰν ζητήσῃ τὴν ψυχὴν αὐτοῦ περιποιήσασθαι, ἀπολέσει αὐτήν, καὶ ὃς ἐὰν ἀπολέσῃ, ζωογονήσει αὐτήν.*

9. Explain briefly (with reference, where necessary, to the passages in which they occur) the following words and phrases:

υἱὸς τοῦ ἀνθρώπου—αἱ ἡμέραι τῆς ἀναλήμψεως αὐτοῦ—ἐπιούσιος—πλεονεξία—φιλάργυρος—μετεωρίζεσθε—φιλονεικία—ἀγωνία—κατασκηνώσεις—Ζηλωτής—Γέεννα—Calvaria.

10. Translate into Greek the following passages:

(*a*) A certain lender had two debtors: the one owed five hundred pence, and the other fifty.

(*b*) And he said unto his disciples, It is impossible but that occasions of stumbling should come: but woe unto him, through whom they come!

(*c*) And the apostles said unto the Lord, Increase our faith.

(*d*) Dost thou alone sojourn in Jerusalem and not know the things which are come to pass there in these days?

11. Give the original of the Lord's Prayer as found in the best MSS. of St Luke.

12. Give and account for any variations in the reading of the following passages:

(*a*) *Καὶ ὑποστρέψαντες οἱ ἀπόστολοι διηγήσαντο αὐτῷ ὅσα ἐποίησαν. καὶ παραλαβὼν αὐτοὺς ὑπεχώρησεν κατ' ἰδίαν εἰς πόλιν καλουμένην Βηθσαϊδά.*

Explain the topography by a map or otherwise.

(*b*) *ἰδόντες δὲ οἱ μαθηταὶ αὐτοῦ Ἰάκωβος καὶ Ἰωάννης εἶπαν Κύριε, θέλεις εἴπωμεν πῦρ καταβῆναι ἀπὸ τοῦ οὐρανοῦ καὶ ἀναλῶσαι αὐτούς; στραφεὶς δὲ ἐπετίμησεν αὐτοῖς. καὶ ἐπορεύθησαν εἰς ἑτέραν κώμην.*

MONDAY, *December* 3, 1883. 9—12.

JOSHUA I—XI; XXIII, XXIV.

1. TRANSLATE:

(a) וְלָרְאוּבֵנִי וְלַגָּדִי וְלַחֲצִי שֵׁבֶט הַמְנַשֶּׁה אָמַר יְהוֹשֻׁעַ לֵאמֹר׃ זָכוֹר אֶת־
הַדָּבָר אֲשֶׁר צִוָּה אֶתְכֶם מֹשֶׁה עֶבֶד־יְהוָה לֵאמֹר יְהוָה אֱלֹהֵיכֶם מֵנִיחַ לָכֶם וְנָתַן
לָכֶם אֶת־הָאָרֶץ הַזֹּאת׃ נְשֵׁיכֶם טַפְּכֶם וּמִקְנֵיכֶם יֵשְׁבוּ בָּאָרֶץ אֲשֶׁר נָתַן לָכֶם
מֹשֶׁה בְּעֵבֶר הַיַּרְדֵּן וְאַתֶּם תַּעַבְרוּ חֲמֻשִׁים לִפְנֵי אֲחֵיכֶם כֹּל גִּבּוֹרֵי הַחַיִל וַעֲזַרְתֶּם
אוֹתָם׃ עַד אֲשֶׁר־יָנִיחַ יְהוָה לַאֲחֵיכֶם כָּכֶם וְיָרְשׁוּ גַם־הֵמָּה אֶת־הָאָרֶץ אֲשֶׁר־יְהוָה
אֱלֹהֵיכֶם נֹתֵן לָהֶם וְשַׁבְתֶּם לְאֶרֶץ יְרֻשָּׁתְכֶם וִירִשְׁתֶּם אוֹתָהּ אֲשֶׁר נָתַן לָכֶם מֹשֶׁה
עֶבֶד יְהוָה בְּעֵבֶר הַיַּרְדֵּן מִזְרַח הַשָּׁמֶשׁ׃

Parse זָכוֹר. Give the derivation and meaning of חֲמֻשִׁים.

(b) וַיְהִי בַּעֲלוֹת הַכֹּהֲנִים נֹשְׂאֵי אֲרוֹן בְּרִית־יְהוָה מִתּוֹךְ הַיַּרְדֵּן נִתְּקוּ כַּפּוֹת
רַגְלֵי הַכֹּהֲנִים אֶל הָחָרָבָה וַיָּשֻׁבוּ מֵי־הַיַּרְדֵּן לִמְקוֹמָם וַיֵּלְכוּ כִתְמוֹל־שִׁלְשֹׁם עַל־כָּל־
גְּדוֹתָיו׃ וְהָעָם עָלוּ מִן־הַיַּרְדֵּן בָּעָשׂוֹר לַחֹדֶשׁ הָרִאשׁוֹן וַיַּחֲנוּ בַּגִּלְגָּל בִּקְצֵה מִזְרַח
יְרִיחוֹ׃ וְאֵת שְׁתֵּים עֶשְׂרֵה הָאֲבָנִים הָאֵלֶּה אֲשֶׁר לָקְחוּ מִן־הַיַּרְדֵּן הֵקִים יְהוֹשֻׁעַ
בַּגִּלְגָּל׃ וַיֹּאמֶר אֶל־בְּנֵי יִשְׂרָאֵל לֵאמֹר אֲשֶׁר יִשְׁאָלוּן בְּנֵיכֶם מָחָר אֶת־אֲבוֹתָם
לֵאמֹר מָה הָאֲבָנִים הָאֵלֶּה׃ וְהוֹדַעְתֶּם אֶת־בְּנֵיכֶם לֵאמֹר בַּיַּבָּשָׁה עָבַר יִשְׂרָאֵל
אֶת־הַיַּרְדֵּן הַזֶּה׃

• כעלות קרי

Discuss the forms of the words שְׁתֵּים, יִשְׁאָלוּן. Write out in full the tense of הוֹדַעְתֶּם.

(c) וַיֹּאמֶר יְהוֹשֻׁעַ אֶל־עָכָן בְּנִי שִׂים־נָא כָבוֹד לַיהוָה אֱלֹהֵי יִשְׂרָאֵל וְתָן־לוֹ תּוֹדָה וְהַגֶּד־נָא לִי מָה עָשִׂיתָ אַל־תְּכַחֵד מִמֶּנִּי׃ וַיַּעַן עָכָן אֶת־יְהוֹשֻׁעַ וַיֹּאמַר אָמְנָה אָנֹכִי חָטָאתִי לַיהוָה אֱלֹהֵי יִשְׂרָאֵל וְכָזֹאת וְכָזֹאת עָשִׂיתִי׃ וָאֶרְאֶה* בַשָּׁלָל אַדֶּרֶת שִׁנְעָר אַחַת טוֹבָה וּמָאתַיִם שְׁקָלִים כֶּסֶף וּלְשׁוֹן זָהָב אֶחָד חֲמִשִּׁים שְׁקָלִים מִשְׁקָלוֹ וָאֶחְמְדֵם וָאֶקָּחֵם וְהִנָּם טְמֻנִים בָּאָרֶץ בְּתוֹךְ הָאָהֳלִי וְהַכֶּסֶף תַּחְתָּיהּ׃

* וארא קרי

Discuss the Massoretic note. Parse fully וְתָן־לוֹ. Write a note on the word הָאָהֳלִי.

(d) אָז יָדַבֵּר יְהוֹשֻׁעַ לַיהוָה בְּיוֹם תֵּת יְהוָה אֶת־הָאֱמֹרִי לִפְנֵי בְּנֵי יִשְׂרָאֵל וַיֹּאמַר לְעֵינֵי יִשְׂרָאֵל שֶׁמֶשׁ בְּגִבְעוֹן דּוֹם וְיָרֵחַ בְּעֵמֶק אַיָּלוֹן׃ וַיִּדֹּם הַשֶּׁמֶשׁ וְיָרֵחַ עָמָד עַד־יִקֹּם גּוֹי אֹיְבָיו הֲלֹא־הִיא כְתוּבָה עַל־סֵפֶר הַיָּשָׁר וַיַּעֲמֹד הַשֶּׁמֶשׁ בַּחֲצִי הַשָּׁמַיִם וְלֹא־אָץ לָבוֹא כְּיוֹם תָּמִים׃ וְלֹא הָיָה כַּיּוֹם הַהוּא לְפָנָיו וְאַחֲרָיו לִשְׁמֹעַ יְהוָה בְּקוֹל אִישׁ כִּי יְהוָה נִלְחָם לְיִשְׂרָאֵל׃

* כולו קמץ

Parse וַיִּדֹּם, יִקֹּם. Explain סֵפֶר הַיָּשָׁר.

(e) וְאַתֶּם רְאִיתֶם אֵת כָּל־אֲשֶׁר עָשָׂה יְהוָה אֱלֹהֵיכֶם לְכָל־הַגּוֹיִם הָאֵלֶּה מִפְּנֵיכֶם כִּי יְהוָה אֱלֹהֵיכֶם הוּא הַנִּלְחָם לָכֶם׃ רְאוּ הִפַּלְתִּי לָכֶם אֶת־הַגּוֹיִם הַנִּשְׁאָרִים הָאֵלֶּה בְּנַחֲלָה לְשִׁבְטֵיכֶם מִן־הַיַּרְדֵּן וְכָל־הַגּוֹיִם אֲשֶׁר הִכְרַתִּי וְהַיָּם הַגָּדוֹל מְבוֹא הַשָּׁמֶשׁ׃ וַיהוָה אֱלֹהֵיכֶם הוּא יֶהְדֳּפֵם מִפְּנֵיכֶם וְהוֹרִישׁ אֹתָם מִלִּפְנֵיכֶם וִירִשְׁתֶּם אֶת־אַרְצָם כַּאֲשֶׁר דִּבֶּר יְהוָה אֱלֹהֵיכֶם לָכֶם׃ וַחֲזַקְתֶּם מְאֹד לִשְׁמֹר וְלַעֲשׂוֹת אֵת כָּל־הַכָּתוּב בְּסֵפֶר תּוֹרַת מֹשֶׁה לְבִלְתִּי סוּר מִמֶּנּוּ יָמִין וּשְׂמֹאול׃

Explain the construction of מְבוֹא הַשָּׁמֶשׁ. Parse יֶהְדֳּפֵם. Derive לְבִלְתִּי and give its usage. Discuss the form שְׂמֹאול.

2. Write notes upon the words and phrases:

יָם הָעֲרָבָה — עֲרֻבוֹת יְרִיחוֹ — שַׂר־צְבָא יְהוָה — הַמְּאַסֵּף — אֶת־סוּסֵיהֶם תְּעַקֵּב — הָאֵלָּה אֲשֶׁר בְּמִקְדַּשׁ יְהוָה׃

3. Give the Hebrew for the following phrases:

(*a*) Our life for yours.

(*b*) And the city shall be accursed.

(*c*) How shall we make a league with you?

(*d*) I am old and stricken in age.

4. Explain the constructions in the following passages:

(*a*) וְהַשַּׁעַר סָגְרוּ אַחֲרֵי כַּאֲשֶׁר יָצְאוּ הָרֹדְפִים אַחֲרֵיהֶם׃

(*b*) אֲשֶׁר מִצְּפוֹן לָעִיר׃

(*c*) וְכֹל לֶחֶם צֵידָם יָבֵשׁ הָיָה נִקֻּדִּים׃

5. Translate accurately with short explanations:

(*a*) הִנֵּה אֲנַחְנוּ בָאִים בָּאָרֶץ אֶת־תִּקְוַת חוּט הַשָּׁנִי הַזֶּה תִּקְשְׁרִי בַּחַלּוֹן אֲשֶׁר הוֹרַדְתָּנוּ׃

* הת״ בצרי

(*b*) בָּעֵת הַהִיא אָמַר יְהוָה אֶל־יְהוֹשֻׁעַ עֲשֵׂה לְךָ חַרְבוֹת צֻרִים וְשׁוּב מֹל אֶת־בְּנֵי־יִשְׂרָאֵל שֵׁנִית׃

(*c*) רַק אֶת־כָּל־הָאָדָם הִכּוּ לְפִי־חָרֶב עַד־הִשְׁמִדָם אוֹתָם לֹא הִשְׁאִירוּ כָּל־נְשָׁמָה׃

(*d*) וְאֶת־עַצְמוֹת יוֹסֵף אֲשֶׁר־הֶעֱלוּ בְנֵי־יִשְׂרָאֵל מִמִּצְרַיִם קָבְרוּ בִשְׁכֶם בְּחֶלְקַת הַשָּׂדֶה אֲשֶׁר קָנָה יַעֲקֹב מֵאֵת בְּנֵי־חֲמוֹר אֲבִי־שְׁכֶם בְּמֵאָה קְשִׂיטָה וַיִּהְיוּ לִבְנֵי־יוֹסֵף לְנַחֲלָה׃

6. Point the following passages, supplying the two principal accents:

(*a*) ויחנו בני ישראל בגלגל ויעשו את הפסח בארבעה עשר יום לחדש בערב בערבות ירחו׃ ויאכלו מעבור הארץ ממחרת הפסח מצות וקלוי בעצם היום הזה׃ וישבת המן ממחרת באכלם מעבור הארץ ולא היה עוד לבני ישראל מן ויאכלו מתבואת ארץ כנען בשנה ההיא׃

(b) ויאמר אליהם יהושע אל תיראו ואל תחתו חזקו ואמצו כי ככה יעשה יהוה לכל איביכם אשר אתם נלחמים אותם: ויכם יהושע אחרי כן וימיתם ויתלם על חמשה עצים ויהיו תלוים על העצים עד הערב: ויהי לעת בוא השמש צוה יהושע וירידום מעל העצים וישליכם אל המערה אשר נחבאו שם וישמו אבנים גדלות על פי המערה עד עצם היום הזה:

7. Translate into Biblical Hebrew:

(a) And all Israel, and their elders, and officers, and their judges, stood on this side the ark and on that side before the priests the Levites, which bare the ark of the covenant of the LORD, as well the stranger, as he that was born among them; half of them over against mount Gerizim, and half of them over against mount Ebal; as Moses the servant of the LORD had commanded before, that they should bless the people of Israel. And afterward he read all the words of the law, the blessings and cursings, according to all that is written in the book of the law.

(b) And Joshua said unto the people, Ye cannot serve the LORD: for he is a holy God; he is a jealous God; he will not forgive your transgressions nor your sins. If ye forsake the LORD, and serve strange gods, then he will turn and do you hurt, and consume you, after that he hath done you good. And the people said unto Joshua, Nay; but we will serve the LORD.

THEOLOGICAL TRIPOS.

FRIDAY, *January* 4, 1884. 9—12.

OLD TESTAMENT. GENERAL PAPER.

[*The answers to* A *and* B *are to be folded up separately. Not more than* seven *questions are to be answered in each of the two groups.*]

A.

I. COMPARE the different accounts of the three great festivals, and their names, in the Pentateuch; and bring together the references to each of them in the other books, canonical and apocryphal.

II. Give a brief outline of the careers of Gideon and Abimelech. What do we learn from the narrative respecting the religious, social, and political condition of Israel in their times? Mention the geographical region in which each of the principal Judges had his origin and sphere of activity.

III. Write a brief history of the local sanctuaries other than Jerusalem. How do you account for the apparent sanction given to them by such men as Samuel?

IV. Sketch the history of the Northern kingdom from the accession of Jeroboam II. to its fall; and mention the chief points of the internal history which are known to us through the contemporary prophets, Hosea excepted.

V. Give an account of Ezekiel's prophecies against foreign nations. In what part of the New Testament are passages and phrases of Ezekiel chiefly repeated more or less exactly? How do you account for this?

VI. Draw out clearly the main heads in (1) the warnings, and (2) the Messianic anticipations, of Malachi; and compare them with the similar contents of Isaiah i—xiv, pointing out in what respects the differences are due to altered historical circumstances.

VII. Sketch the relations of Palestine and the Jews with Egypt between the Return from the Captivity and the Christian era.

VIII. Indicate clearly the successive stages of the argument of the book of Job, excluding the narratives at the beginning and end. Criticise clearly and concisely, with illustrations, the two following judgements. "The Book of Job is a fund of parallels for Isaiah xl—lxvi." "Un-Jewish in form, and in fiercest hostility with Judaism, it hovers like a meteor over the old Hebrew literature, in it but not of it."

IX. Trace the meaning of the words *holy* and *righteous* through their various applications in the Old Testament.

X. Explain, and give the context of, not more than four of the following passages, correcting the translation where necessary:—

(1) Binding his foal unto the vine, and his ass's colt unto the choice vine, he washed his garments in wine, and his clothes in the blood of grapes.

(2) Then shall the land rest, and enjoy her sabbaths. As long as it lieth desolate, it shall rest; because it did not rest in your sabbaths, when ye dwelt upon it.

(3) Man doth not live by bread alone, but by every word that proceedeth out of the mouth of the Lord doth man live.

(4) Tell it not in Gath, publish it not in the streets of Askelon.

(5) Then I was by him as one brought up with him: and I was daily his delight, rejoicing always before him; rejoicing in the habitable part of his earth, and my delights were with the sons of men.

(6) Give a portion to seven, and also to eight; for thou knowest not what evil shall be upon the earth.

(7) In that day shall thy mouth be opened to him which is escaped, and thou shalt speak, and be no more dumb; and thou shalt be a sign unto them; and they shall know that I am the Lord.

(8) O Lord, I have heard thy speech, and was afraid: O Lord, revive thy work in the midst of the years, in the midst of the years make known; in wrath remember mercy.

B.

1. STATE in detail the evidence which exists to shew that among the Jews themselves there were differences of opinion as to whether some of their sacred books should be included in the Canon.

Translate the following extract, state whence it is taken, and summarise the evidence as to the Old Testament Canon afforded by the passage of which it is the commencement:—

οὐ γὰρ μυριάδες βιβλίων εἰσὶ παρ' ἡμῖν ἀσυμφώνων καὶ μαχομένων· δύο δὲ μόνα πρὸς τοῖς εἴκοσι βιβλία, τοῦ παντὸς ἔχοντα χρόνου τὴν ἀναγραφὴν, τὰ δικαίως θεῖα πεπιστευμένα.

2. What grounds (real or alleged) are there for supposing (*a*) that the Hebrew text of the Old Testament has suffered corruptions; (*b*) that all known Hebrew MSS. of the Old Testament are descended from one common archetype?

Explain:

ססס–בנ׳א–כצל–קמץ בוק–לאשכנזים–הפטרה–ב׳ טעמים–מלרע–א׳ נחה
סגול בס׳פ–עטור סופרים.

3. What features of the Septuagint version make it a useful means of correcting the Hebrew text?

Shew how it may be possible apart from manuscript authority to distinguish between true Septuagint readings and later additions.

Distinguish as to their general character the versions of Aquila, Symmachus, and Theodotion considered as translations of the Hebrew, and illustrate your remarks by examples.

4. Describe the probable origin of written Targums. Comment on the meaning and propriety of the term "Targum of Onkelos." Classify all known Targums under the heads of (1) Babylonian, (2) Palestinian.

5. Give a dated list of the principal revisions of the English Version of the Bible, name the sources of each, and state in the case of each what distinction is made between the Apocryphal books and the rest.

6. What statements as to the Mosaic authorship of part or of the whole of the Pentateuch have been found in (*a*) the Pentateuch itself, (*b*) the New Testament?

Examine the usage of the word 'torah' in the Old Testament.

7. Enumerate *either* the most important matters contained in the books of Samuel and omitted in the First book of Chronicles, *or* those contained in the First book of Chronicles and omitted in the books of Samuel.

What indications are there of the sources from which the books of Samuel were compiled? On what principles do the materials for the books of Chronicles seem to have been selected?

8. On what grounds and on what various plans has the book of Zechariah been assigned to more than one author?

Give an outline of the contents of the whole book.

9. Analyse the book of Proverbs, dividing it into its constituent parts. Which do you consider to be the germ of the whole?

In this connexion comment on לַעֲלוּקָה.

10. Which portions of the book of Daniel are written in Hebrew and which in Aramaic? State and examine the arguments based on points of language which have been adduced for assigning the book to the Grecian period.

Suggest reasons for its having been placed among the Hagiographa.

FRIDAY, *January* 4, 1884. 1—4.

GENESIS.

1. TRANSLATE, giving notes on the words or phrases inclosed by asterisks, and on any other points where notes seem needed:

(a) וַיֹּאמֶר יְהוָה אֱלֹהִים הֵן הָאָדָם הָיָה כְּאַחַד מִמֶּנּוּ לָדַעַת טוֹב וָרָע
וְעַתָּה *פֶּן־יִשְׁלַח* יָדוֹ וְלָקַח גַּם מֵעֵץ הַחַיִּים וְאָכַל *וָחַי* לְעֹלָם : וַיְשַׁלְּחֵהוּ
יְהוָה אֱלֹהִים מִגַּן־עֵדֶן לַעֲבֹד אֶת־הָאֲדָמָה אֲשֶׁר לֻקַּח מִשָּׁם :

(b) אַחַר הַדְּבָרִים הָאֵלֶּה הָיָה דְבַר־יְהוָה אֶל־אַבְרָם בַּמַּחֲזֶה לֵאמֹר אַל־תִּירָא
אַבְרָם אָנֹכִי מָגֵן לָךְ שְׂכָרְךָ הַרְבֵּה מְאֹד : וַיֹּאמֶר אַבְרָם אֲדֹנָי יְהוִה מַה־תִּתֶּן־לִי
וְאָנֹכִי הוֹלֵךְ עֲרִירִי *וּבֶן־מֶשֶׁק* בֵּיתִי הוּא *דַּמֶּשֶׂק אֱלִיעֶזֶר* : וַיֹּאמֶר אַבְרָם הֵן
לִי לֹא נָתַתָּה זָרַע וְהִנֵּה בֶן־בֵּיתִי יוֹרֵשׁ אֹתִי : וְהִנֵּה דְבַר־יְהוָה אֵלָיו לֵאמֹר
לֹא יִירָשְׁךָ זֶה כִּי־אִם אֲשֶׁר יֵצֵא מִמֵּעֶיךָ הוּא יִירָשֶׁךָ : וַיּוֹצֵא אֹתוֹ הַחוּצָה
וַיֹּאמֶר הַבֶּט־נָא הַשָּׁמַיְמָה וּסְפֹר הַכּוֹכָבִים אִם־תּוּכַל לִסְפֹּר אֹתָם וַיֹּאמֶר לוֹ כֹּה
יִהְיֶה זַרְעֶךָ :

(c) וְיִצְחָק בָּא *מִבּוֹא* בְּאֵר לַחַי רֹאִי וְהוּא יוֹשֵׁב בְּאֶרֶץ הַנֶּגֶב : וַיֵּצֵא
יִצְחָק לָשׂוּחַ בַּשָּׂדֶה *לִפְנוֹת עָרֶב* וַיִּשָּׂא עֵינָיו וַיַּרְא וְהִנֵּה גְמַלִּים בָּאִים : וַתִּשָּׂא
רִבְקָה אֶת־עֵינֶיהָ וַתַּרְא אֶת־יִצְחָק וַתִּפֹּל מֵעַל הַגָּמָל : וַתֹּאמֶר אֶל־הָעֶבֶד מִי־הָאִישׁ
הַלָּזֶה הַהֹלֵךְ בַּשָּׂדֶה לִקְרָאתֵנוּ וַיֹּאמֶר הָעֶבֶד הוּא אֲדֹנִי וַתִּקַּח הַצָּעִיף וַתִּתְכָּס :

(d) וַיֹּאמֶר יוֹסֵף אֶל־אֶחָיו גְּשׁוּ־נָא אֵלַי וַיִּגְּשׁוּ וַיֹּאמֶר אֲנִי יוֹסֵף אֲחִיכֶם אֲשֶׁר־
מְכַרְתֶּם אֹתִי מִצְרָיְמָה : וְעַתָּה אַל־תֵּעָצְבוּ וְאַל־יִחַר בְּעֵינֵיכֶם כִּי־מְכַרְתֶּם אֹתִי הֵנָּה
כִּי לְמִחְיָה שְׁלָחַנִי אֱלֹהִים לִפְנֵיכֶם : כִּי־זֶה שְׁנָתַיִם הָרָעָב בְּקֶרֶב הָאָרֶץ וְעוֹד
חָמֵשׁ שָׁנִים אֲשֶׁר אֵין־חָרִישׁ וְקָצִיר : וַיִּשְׁלָחֵנִי אֱלֹהִים לִפְנֵיכֶם לָשׂוּם לָכֶם
שְׁאֵרִית בָּאָרֶץ וּלְהַחֲיוֹת לָכֶם *לִפְלֵיטָה גְּדֹלָה* : וְעַתָּה לֹא־אַתֶּם שְׁלַחְתֶּם אֹתִי
הֵנָּה כִּי *הָאֱלֹהִים* וַיְשִׂימֵנִי לְאָב לְפַרְעֹה וּלְאָדוֹן לְכָל־בֵּיתוֹ וּמֹשֵׁל בְּכָל־אֶרֶץ מִצְרָיִם :

2. Translate, with such philological, grammatical, or critical comments as seem necessary:

(*a*) וַיִּקְרָא אֶת־שְׁמוֹ נֹחַ לֵאמֹר זֶה יְנַחֲמֵנוּ מִמַּעֲשֵׂנוּ וּמֵעִצְּבוֹן יָדֵינוּ מִן־הָאֲדָמָה אֲשֶׁר אֵרְרָהּ יְהוָה׃

(*b*) וַתִּקְרָא שֵׁם־יְהוָה הַדֹּבֵר אֵלֶיהָ אַתָּה אֵל רֳאִי כִּי אָמְרָה הֲגַם הֵלֹם רָאִיתִי אַחֲרֵי רֹאִי׃

(*c*) וְלִשָּׂרָה אָמַר הִנֵּה נָתַתִּי אֶלֶף כֶּסֶף לְאָחִיךְ הִנֵּה הוּא־לְךָ כְּסוּת עֵינַיִם לְכֹל אֲשֶׁר אִתָּךְ וְאֵת כֹּל וְנֹכָחַת׃

(*d*) עַל־פְּנֵי כָל־אֶחָיו נָפָל׃

(*e*) וַיֹּאמֶר עֵשָׂו הִנֵּה אָנֹכִי הוֹלֵךְ לָמוּת וְלָמָּה־זֶּה לִי בְּכֹרָה׃

(*f*) הִנֵּה עֵשָׂו אָחִיךָ מִתְנַחֵם לְךָ לְהָרְגֶךָ׃

(*g*) וְעַתָּה הָלֹךְ הָלַכְתָּ כִּי־נִכְסֹף נִכְסַפְתָּה לְבֵית אָבִיךָ לָמָּה גָנַבְתָּ אֶת־אֱלֹהָי׃

(*h*) וְהָרָעָב הָיָה עַל כָּל־פְּנֵי הָאָרֶץ וַיִּפְתַּח יוֹסֵף אֶת־כָּל־אֲשֶׁר בָּהֶם וַיִּשְׁבֹּר לְמִצְרַיִם וַיֶּחֱזַק הָרָעָב בְּאֶרֶץ מִצְרָיִם׃

(*i*) וְאֶת־יְהוּדָה שָׁלַח לְפָנָיו אֶל־יוֹסֵף לְהוֹרֹת לְפָנָיו גֹּשְׁנָה וַיָּבֹאוּ אַרְצָה גֹּשֶׁן׃

3. Parse and explain any peculiarities of the following forms:

הַתָּל—וְלָקַחַת—וַיִּשָּׂם—נְמַלְּטֶם—יָדוֹן—בְּאַהֲבָתוֹ אֹתָהּ—הֲבִיאֹתִיו—תִּהְיֶיָן—טִבַּח—הִלֶּדֶת׃

4. Render into Hebrew, if possible according to the original:

(*a*) But flesh with the life thereof, which is the blood thereof, shall ye not eat.

(*b*) Let a little water, I pray you, be fetched, and wash your feet, and rest yourselves under the tree.

(*c*) Hear us, my lord: thou art a mighty prince among us: in the choice of our sepulchres bury thy dead; none of us shall withhold from thee his sepulchre, but that thou mayest bury thy dead.

(*d*) And when Joseph's brethren saw that their father was dead, they said, Joseph will peradventure hate us, and will certainly requite us all the evil which we did unto him.

5. Compare the Biblical cosmogony with any other, and point out any difference of purpose which seems manifest in the Scripture record.

6. What use is made in the New Testament of examples derived from Genesis I—X? Point out how the later use is justified by the earlier record.

7. Discuss the bearing of the history of Joseph's residence in Egypt upon the date of the book of Genesis.

8. Add vowel points and chief accents to:

ויהי מקץ ארבעים יום ויפתח נח את חלון התבה אשר עשה: וישלח את הערב ויצא יצוא ושוב עד יבשת המים מעל הארץ: וישלח את היונה מאתו לראות הקלו המים מעל פני האדמה: ולא מצאה היונה מנוח לכף רגלה ותשב אליו אל התבה כי מים על פני כל הארץ וישלח ידו ויקחה ויבא אתה אליו אל התבה: ויחל עוד שבעת ימים אחרים ויסף שלח את היונה מן התבה: ותבא אליו היונה לעת ערב והנה עלה זית טרף בפיה וידע נח כי קלו המים מעל הארץ: ויחל עוד שבעת ימים אחרים וישלח את היונה ולא יספה שוב אליו עוד:

9. Translate with brief notes:

(a) וַיֹּאמֶר אֲלֵיהֶם מֹשֶׁה אִם־תַּעֲשׂוּן אֶת־הַדָּבָר הַזֶּה אִם־הִתְחַלְּצוּ לִפְנֵי יְהוָה לַמִּלְחָמָה: וְעָבַר לָכֶם כָּל־חָלוּץ אֶת־הַיַּרְדֵּן לִפְנֵי יְהוָה עַד הוֹרִישׁוֹ אֶת־אֹיְבָיו מִפָּנָיו: וְנִכְבְּשָׁה הָאָרֶץ לִפְנֵי יְהוָה וְאַחַר תָּשֻׁבוּ וְהְיִיתֶם נְקִיִּם מֵיְהוָה וּמִיִּשְׂרָאֵל וְהָיְתָה הָאָרֶץ הַזֹּאת לָכֶם לַאֲחֻזָּה לִפְנֵי יְהוָה: וְאִם־לֹא תַעֲשׂוּן כֵּן הִנֵּה חֲטָאתֶם לַיהוָה וִדְעוּ חַטַּאתְכֶם אֲשֶׁר תִּמְצָא אֶתְכֶם: בְּנוּ־לָכֶם עָרִים לְטַפְּכֶם וּגְדֵרֹת לְצֹנַאֲכֶם וְהַיֹּצֵא מִפִּיכֶם תַּעֲשׂוּ: וַיֹּאמֶר בְּנֵי־גָד וּבְנֵי רְאוּבֵן אֶל־מֹשֶׁה לֵאמֹר עֲבָדֶיךָ יַעֲשׂוּ כַּאֲשֶׁר אֲדֹנִי מְצַוֶּה:

(b) וַיֹּאמֶר שְׁמוּאֵל אֵיךְ אֵלֵךְ וְשָׁמַע שָׁאוּל וַהֲרָגָנִי וַיֹּאמֶר יְהוָה עֶגְלַת בָּקָר תִּקַּח בְּיָדֶךָ וְאָמַרְתָּ לִזְבֹּחַ לַיהוָה בָּאתִי: וְקָרָאתָ לְיִשַׁי בַּזָּבַח וְאָנֹכִי אוֹדִיעֲךָ אֵת אֲשֶׁר־תַּעֲשֶׂה וּמָשַׁחְתָּ לִי אֵת אֲשֶׁר־אֹמַר אֵלֶיךָ: וַיַּעַשׂ שְׁמוּאֵל אֵת אֲשֶׁר דִּבֶּר יְהוָה וַיָּבֹא בֵּית לָחֶם וַיֶּחֱרְדוּ זִקְנֵי הָעִיר לִקְרָאתוֹ וַיֹּאמֶר שָׁלוֹם בּוֹאֶךָ: וַיֹּאמֶר שָׁלוֹם לִזְבֹּחַ לַיהוָה בָּאתִי הִתְקַדְּשׁוּ וּבָאתֶם אִתִּי בַּזָּבַח וַיְקַדֵּשׁ אֶת־יִשַׁי וְאֶת־בָּנָיו וַיִּקְרָא לָהֶם לַזָּבַח: וַיְהִי בְּבוֹאָם וַיַּרְא אֶת־אֱלִיאָב וַיֹּאמֶר אַךְ נֶגֶד יְהוָה מְשִׁיחוֹ:

SATURDAY, *January* 5, 1884. 9—12.

NEW TESTAMENT. GENERAL PAPER.

[*The answers to* A, B, C *and* D *are to be folded up separately. Not more than four questions are to be answered in each of the four groups.*]

A.

1. DESCRIBE the nature and extent of the testimony of the Apostolic Fathers generally to books of the New Testament.

2. By what title or titles does Justin Martyr refer to records of the Life of Christ? Discuss the question whether he is referring to our Gospels.

3. State what is known about Hegesippus from his remains and from other sources, and estimate his importance in relation to the Canon.

4. Investigate the date of the Muratorian fragment, and state the testimony which it bears to books of the Canon either directly or by obvious inference.

5. Discuss the evidence in regard to the Gospel according to St John to be derived from what is known of Basilides and Valentinus and their schools.

6. Examine the external evidence for the genuineness of the First Epistle of St Peter.

B.

I. Distinguish the senses of the different words in each of the following groups;—

(1) εὐλαβής εὐσεβής θεοσεβής σεβόμενος θρησκός.

(2) διδάσκω κατηχέω μαθητεύω παιδεύω.

(3) ἁμαρτία ἀνομία κακία κακοποιεῖν παρανομία πονηρία.

(4) κρίνω ἀνακρίνω διακρίνω ἐνκρίνω ἐπικρίνω κατακρίνω συνκρίνω.

II. Trace the connexion between the different senses of each of the following words, pointing out, with an illustrative example, which senses occur in the New Testament:—

αἵρεσις ἀποκατάστασις λειτουργέω λύω μῦθος οἰκονομία παράκλησις περιποίησις πλήρωμα στοιχεῖον.

III. How would you proceed in order to ascertain whether a given grammatical construction alleged to be Hebraistic is really due to the influence of Hebrew or not? Illustrate your answer by application to three or four (1) genuine, (2) imaginary Hebraisms.

IV. Translate, explaining the constructions and their causes,

(1) ἕστηκα μαρτυρόμενος μικρῷ τε καὶ μεγάλῳ, οὐδὲν ἐκτὸς λέγων ὧν τε οἱ προφῆται ἐλάλησαν μελλόντων γίνεσθαι καὶ Μωυσῆς, εἰ παθητὸς ὁ χριστός, εἰ πρῶτος ἐξ ἀναστάσεως νεκρῶν φῶς μέλλει καταγγέλλειν τῷ τε λαῷ καὶ τοῖς ἔθνεσιν.

(2) εὑρίσκω ἄρα τὸν νόμον τῷ θέλοντι ἐμοὶ ποιεῖν τὸ καλὸν ὅτι ἐμοὶ τὸ κακὸν παράκειται.

(3) γνωρίζω δὲ ὑμῖν, ἀδελφοί, τὸ εὐαγγέλιον ὃ εὐηγγελισάμην ὑμῖν, ὃ καὶ παρελάβετε, ἐν ᾧ καὶ ἑστήκατε, δι' οὗ καὶ σώζεσθε, τίνι λόγῳ εὐηγγελισάμην ὑμῖν, εἰ κατέχετε, ἐκτὸς εἰ μὴ εἰκῇ ἐπιστεύσατε.

(4) ἀπὸ δὲ τῶν δοκούντων εἶναί τι, ὁποῖοί ποτε ἦσαν οὐδέν μοι διαφέρει, πρόσωπον [ὁ] θεὸς ἀνθρώπου οὐ λαμβάνει, ἐμοὶ γὰρ οἱ δοκοῦντες οὐδὲν προσανέθεντο.

V. (1) State and account for the difference of sense in classical Greek between ὥστε with the infinitive and with the indicative, and examine the usage of the New Testament writers in this respect.

(2) Illustrate by three or four examples from the New Testament the difference in sense between the aorist participle and the perfect participle. In what cases can the aorist participle express action not antecedent to the action expressed by the principal verb?

VI. Translate the following, explaining the datives:—

(1) τεσσεράκοντα καὶ ἓξ ἔτεσιν οἰκοδομήθη ὁ ναὸς οὗτος.

(2) ἦν ἀστεῖος τῷ θεῷ.

(3) ἐὰν μὴ περιτμηθῆτε τῷ ἔθει τοῦ Μωυσέως, οὐ δύνασθε σωθῆναι.

(4) νῦν δὲ ἠλεήθητε τῇ τούτων ἀπειθίᾳ.

(5) ἔρχομαί σοι ταχύ.

and the following, explaining the uses of ἐν:—

(6) ἐν ῥάβδῳ ἔλθω πρὸς ὑμᾶς, ἢ ἐν ἀγάπῃ πνεύματί τε πραύτητος;

(7) εἰ ἐν ὑμῖν κρίνεται ὁ κόσμος, ἀνάξιοί ἐστε κριτηρίων ἐλαχίστων;

(8) ἔσομαι τῷ λαλοῦντι βάρβαρος καὶ ὁ λαλῶν ἐν ἐμοὶ βάρβαρος.

(9) ὑπὲρ οὗ πρεσβεύω ἐν ἁλύσει.

(10) ἐπ' ἐσχάτου τῶν ἡμερῶν τούτων ἐλάλησεν ἡμῖν ἐν υἱῷ.

C.

1. Examine the use of the title 'Son of Man' in the Old and New Testament.

2. What were the several difficulties connected with the inclusion of Gentiles with Jews in the Christian Church? How far were they overcome in New Testament times?

3. What is St Paul's view of the moral and spiritual responsibility and history of man apart from revelation?

4. On what grounds has the Pauline authorship of the Epistle to the Colossians been disputed? Discuss the question.

5. Quote the designations of the persons addressed in the Epistle of St James and the First Epistle of St Peter and examine their meaning.

6. "In the last quarter of the first century, the world relatively to the Christian Church was a new world; and St John presents in his view of the work and Person of Christ the answers which he had found to be given in Him to the problems which were offered by the changed order."

Develop and illustrate this remark.

D.

I. Examine carefully the following statement:—"Both manuscripts [ℵ and B] must have been prepared under the superintendence of a scholar closely connected with the school of which Origen was the head"; and further the hypothesis that that scholar was Eusebius.

II. Enumerate and give some account of the chief Greek MSS (ℵ and B excepted) and the Latin and Syriac versions (or MSS of versions) now available for the text of the Acts. What Greek and Latin Fathers have quoted any considerable amount of the Acts? Mention any points of special interest (not single passages) in the textual history of this book.

III. Explain the use, and the limits of the use, (1) of the Eusebian canons, (2) of the extant Greek lectionaries, and (3) of definite textual statements by Fathers, for the purposes of textual criticism.

IV. Give an account of, and discuss briefly, one passage of disputed text from each of the four following books:—St Matthew's Gospel, the Catholic Epistles, Ephesians, and the Apocalypse.

V. Interpret and expand the symbols and abbreviations in the two following passages;

or (better, if you can) discuss the external and internal evidence affecting the two passages, pointing out how the readings which you reject might naturally be derived from the readings which you accept:—

(1) { *ἐμὲ* / *ἡμᾶς* } *δεῖ ἐργάζεσθαι τὰ ἔργα τοῦ* { *πέμψαντός με* / *πέμψαντος ἡμᾶς* } *ἕως ἡμέρα ἐστίν.*

εμε...με ℵ[a c. b]ACXΓΔ unc[10] cu[omn] latt syr.vg-hl aeth.codd Chr pp[lat] Diat Cyr.*Lc*.syr.txt

ημας...με B(D) syr.hr the (D *δει ημας*)

ημας...ημας ℵ*L me aeth.ro Cyr.*Jo*.2/2 (? Cyr.*Lc*.syr e sensu)

εργαζεσθε (om *εμε δει* et *τα...με*) Orig.*Jo;Jer* Hier[s]

(2) *μὴ οὖν βασιλευέτω ἡ ἁμαρτία ἐν τῷ θνητῷ ὑμῶν σώματι εἰς τὸ ὑπακούειν* { *αὐτῇ ἐν ταῖς ἐπιθυμίαις αὐτοῦ* / *αὐτῇ* / *[ταῖς ἐπιθυμίαις αὐτοῦ]* }

αυτη εν ταις επιθυμιαις αυτου C*K$_2$L$_2$P$_2$ cu[pl] syr.hl Bas[s] Chr pp[scr] (*επ. αυτης* 115 Thdt)

ταις επιθυμιαις αυτου ℵABC* 39 47 80 137 al[p] r_2 vg syr.vg me the aeth arm Orig.(*Or;*)*Mt;Rom*.lat.Ruf[s] Meth Cyr Ambst Aug (*επ. αυτης* Orig.*Or*)

αυτη D$_2$G$_2$ *m* Iren.lat Orig.*Jos*.lat.Ruf[1] Tert al

om 178 *e* Amb al

VI. Describe the character and the probable origin of the Italian Latin version, in the correct and restricted sense of the term. What evidence do we possess on these heads, and also as to its name? State and criticise the different views which have been held about the Curetonian Syriac.

SATURDAY, *January* 5, 1884. 1—4.

A.

THE FOUR GOSPELS WITH SPECIAL REFERENCE TO THE GOSPEL ACCORDING TO ST MARK.

1. STATE the broad facts as to the relations between the Gospel according to St Mark and the other Synoptic Gospels in those narratives which they have in common. What inferences would you draw?

2. Μάρκος.....ὅσα ἐμνημόνευσεν ἀκριβῶς ἔγραψεν, οὐ μέντοι τάξει τὰ ὑπὸ τοῦ Χριστοῦ ἢ λεχθέντα ἢ πραχθέντα. Papias ap. Euseb.

Discuss the question whether this description fits our Gospel according to St Mark.

3. What saying or portion of a saying of Christ's is given by St Mark alone in the following cases?—

(*a*) On His beginning to preach.

(*b*) When the Pharisees complained of His disciples for picking the ears of corn on the Sabbath.

(*c*) On the return of the twelve from their mission.

(*d*) In answering the father of the demoniac boy.

Give the words in Greek, if you can.

4. What notices of the Herodian party are peculiar to St Mark? How would you explain the combination of the Pharisees with the Herodians?

5. Translate the following, commenting on anything that seems to require explanation in the phrases or grammatical constructions.

(*a*) καὶ φωνὴ ἐγένετο ἐκ τῶν οὐρανῶν Σὺ εἶ ὁ υἱός μου ὁ ἀγαπητός, ἐν σοὶ εὐδόκησα.

(*b*) ἡ δὲ Ἡρῳδιὰς ἐνεῖχεν αὐτῷ καὶ ἤθελεν αὐτὸν ἀποκτεῖναι, καὶ οὐκ ἠδύνατο· ὁ γὰρ Ἡρῴδης ἐφοβεῖτο τὸν Ἰωάνην, εἰδὼς αὐτὸν ἄνδρα δίκαιον καὶ ἅγιον, καὶ συνετήρει αὐτόν, καὶ ἀκούσας αὐτοῦ πολλὰ ἠπόρει, καὶ ἡδέως αὐτοῦ ἤκουεν.

(*c*) καὶ ἀναστενάξας τῷ πνεύματι αὐτοῦ λέγει Τί ἡ γενεὰ αὕτη ζητεῖ σημεῖον; ἀμὴν λέγω, εἰ δοθήσεται τῇ γενεᾷ ταύτῃ σημεῖον.

(*d*) καὶ ἐπηρώτων αὐτὸν λέγοντες Ὅτι λέγουσιν οἱ γραμματεῖς ὅτι Ἠλείαν δεῖ ἐλθεῖν πρῶτον;

(*e*) βλέπετε ἀπὸ τῶν γραμματέων τῶν θελόντων ἐν στολαῖς περιπατεῖν καὶ ἀσπασμοὺς ἐν ταῖς ἀγοραῖς καὶ πρωτοκαθεδρίας ἐν ταῖς συναγωγαῖς καὶ πρωτοκλισίας ἐν τοῖς δείπνοις, οἱ κατέσθοντες τὰς οἰκίας τῶν χηρῶν καὶ προφάσει μακρὰ προσευχόμενοι· οὗτοι λήμψονται περισσότερον κρίμα.

(*f*) παραδώσουσιν ὑμᾶς εἰς συνέδρια καὶ εἰς συναγωγὰς δαρήσεσθε καὶ ἐπὶ ἡγεμόνων καὶ βασιλέων σταθήσεσθε ἕνεκεν ἐμοῦ εἰς μαρτύριον αὐτοῖς.

6. Translate:—

(a) καὶ ὅτε ἐγένετο κατὰ μόνας, ἠρώτων αὐτὸν οἱ περὶ αὐτὸν σὺν τοῖς δώδεκα τὰς παραβολάς. καὶ ἔλεγεν αὐτοῖς Ὑμῖν τὸ μυστήριον δέδοται τῆς βασιλείας τοῦ θεοῦ· ἐκείνοις δὲ τοῖς ἔξω ἐν παραβολαῖς τὰ πάντα γίνεται, ἵνα βλέποντες βλέπωσι καὶ μὴ ἴδωσιν, καὶ ἀκούοντες ἀκούωσι καὶ μὴ συνίωσιν, μή ποτε ἐπιστρέψωσιν καὶ ἀφεθῇ αὐτοῖς. καὶ λέγει αὐτοῖς Οὐκ οἴδατε τὴν παραβολὴν ταύτην, καὶ πῶς πάσας τὰς παραβολὰς γνώσεσθε;

Comment on the uses of the word μυστήριον in the New Testament.

(b) πᾶς γὰρ πυρὶ ἁλισθήσεται. Καλὸν τὸ ἅλας· ἐὰν δὲ τὸ ἅλας ἄναλον γένηται, ἐν τίνι αὐτὸ ἀρτύσετε; ἔχετε ἐν ἑαυτοῖς ἅλα, καὶ εἰρηνεύετε ἐν ἀλλήλοις.

Explain these words, referring to the connexion in which they stand.

7. Give the meaning or meanings of the following words, stating the connexion in which they severally occur in St Mark:—

ἀμφιβάλλειν, ἄμφοδος, Ἑλληνίς, κατάλυμα, κεφαλιοῦν, μηκύνειν, ξέστης, σπεκουλάτωρ, τηλαυγῶς, ὑπολήνιον.

8. Discuss the text in the following:—

(a) ἀρχὴ τοῦ εὐαγγελίου Ἰησοῦ Χριστοῦ, υἱοῦ τοῦ θεοῦ· ὡς γέγραπται ἐν τοῖς προφήταις, Ἰδού, ἐγὼ ἀποστέλλω τὸν ἄγγελόν μου πρὸ προσώπου σου, ὃς κατασκευάσει τὴν ὁδόν σου ἔμπροσθέν σου.

(b) ὃς δ' ἂν βλασφημήσῃ εἰς τὸ Πνεῦμα τὸ Ἅγιον, οὐκ ἔχει ἄφεσιν εἰς τὸν αἰῶνα, ἀλλ' ἔνοχός ἐστιν αἰωνίου κρίσεως.

(c) καὶ ἦλθον εἰς τὸ πέραν τῆς θαλάσσης εἰς τὴν χώραν τῶν Γαδαρηνῶν.

9. Give the Greek of the following:—

(a) And some fell on stony ground where it had not much earth, and immediately it sprang up, because it had no depth of earth.

(b) And He commanded the people to sit down on the ground; and He took the seven loaves and gave thanks and brake and gave to His disciples to set before them; and they did set them before the people.

(c) And no man putteth new wine into old bottles: else the new wine doth burst the bottles, and the wine is spilled, and the bottles will be marred: but new wine must be put into new bottles.

(d) Now learn a parable of the fig tree; When her branch is yet tender, and putteth forth leaves, ye know that summer is near: so ye in like manner, when ye shall see these things come to pass, know that it is nigh, even at the doors.

B.

I. State and examine the alleged differences between the gospel of St John and those of the Synoptists as to (1) the time and place, (2) the form, of our Lord's teaching.

II. Give some account of the Sadducees, discussing especially (1) their origin, (2) their religious and political relations.

Explain the following:

"The theological tenets of the Sadducees, as they appear in the New Testament and Josephus, had a purely political basis."

III. State the meaning (or meanings) of the following terms as used in the gospels:

χρηματίζομαι—ἐπιστάτης—χωρεῖν—ἀπέχειν—νύμφη—ἀγγεῖον—πειράζειν—ὑπωπιάζειν—γράμμα, γράμματα—οἱ Ἰουδαῖοι.

IV. Paraphrase the following so as to bring out the meaning, correcting the text where you think necessary:

(*a*) *ἀπὸ δὲ τῶν ἡμερῶν Ἰωάννου τοῦ βαπτιστοῦ ἕως ἄρτι ἡ βασιλεία τῶν οὐρανῶν βιάζεται, καὶ βιασταὶ ἁρπάζουσιν αὐτήν. πάντες γὰρ οἱ προφῆται καὶ ὁ νόμος ἕως Ἰωάννου ἐπροφήτευσαν. καὶ εἰ θέλετε δέξασθαι, αὐτός ἐστιν Ἠλίας ὁ μέλλων ἔρχεσθαι.*

(*b*) *ὁ δὲ Θεὸς οὐ μὴ ποιήσῃ τὴν ἐκδίκησιν τῶν ἐκλεκτῶν αὐτοῦ τῶν βοώντων αὐτῷ ἡμέρας καὶ νυκτός, καὶ μακροθυμεῖ ἐπ' αὐτοῖς; λέγω ὑμῖν, ὅτι ποιήσει τὴν ἐκδίκησιν αὐτῶν ἐν τάχει. πλὴν ὁ υἱὸς τοῦ ἀνθρώπου ἐλθὼν ἆρα εὑρήσει τὴν πίστιν ἐπὶ τῆς γῆς;*

Explain the construction of *ὁ δὲ Θεὸς.....μακροθυμεῖ.*

Discuss the meaning of *ἐπ' αὐτοῖς.*

(*c*) *πῦρ ἦλθον βαλεῖν εἰς τὴν γῆν, καὶ τί θέλω εἰ ἤδη ἀνήφθη; βάπτισμα δὲ ἔχω βαπτισθῆναι, καὶ πῶς συνέχομαι ἕως οὗ τελεσθῇ; δοκεῖτε ὅτι εἰρήνην παρεγενόμην δοῦναι ἐν τῇ γῇ; οὐχί, λέγω ὑμῖν, ἀλλ' ἢ διαμερισμόν.*

Discuss the construction of *τί θέλω.....ἀνήφθη*; and the sense of *συνέχομαι.*

(*d*) *κέκραγε λέγων,* Οὗτος ἦν ὃν εἶπον, Ὁ ὀπίσω μου ἐρχόμενος, *ἔμπροσθέν μου γέγονεν· ὅτι πρῶτός μου ἦν.* Καὶ *ἐκ τοῦ πληρώματος αὐτοῦ ἡμεῖς πάντες ἐλάβομεν καὶ χάριν ἀντὶ χάριτος· ὅτι ὁ νόμος διὰ* Μωσέως *ἐδόθη, ἡ χάρις καὶ ἡ ἀλήθεια διὰ* Ἰησοῦ Χριστοῦ *ἐγένετο.*

(*e*) *πάτερ ἅγιε, τήρησον αὐτοὺς ἐν τῷ ὀνόματί σου, οὓς δέδωκάς μοι, ἵνα ὦσιν ἕν, καθὼς ἡμεῖς. ὅτε ἤμην μετ' αὐτῶν ἐν τῷ κόσμῳ, ἐγὼ ἐτήρουν αὐτοὺς ἐν τῷ ὀνόματί σου· οὓς δέδωκάς μοι ἐφύλαξα, καὶ οὐδεὶς ἐξ αὐτῶν ἀπώλετο, εἰ μὴ ὁ υἱὸς τῆς ἀπωλείας, ἵνα ἡ γραφὴ πληρωθῇ.*

Distinguish in meaning between *τηρεῖν* and *φυλάσσειν.*

What is referred to in *ἵνα ἡ γραφὴ πληρωθῇ*?

V. Retranslate *four* of the following into the original, noticing any variations of reading and suggesting improvements in the English rendering.

(*a*) The light of the body is the eye: if therefore thine eye be single, thy whole body shall be full of light.

(*b*) For what is a man profited, if he shall gain the whole world, and lose his own soul? or what shall a man give in exchange for his soul?

(*c*) And he called his ten servants, and delivered them ten pounds, and said unto them, Occupy till I come.

(*d*) Then came the Jews round about him, and said unto him, How long dost thou make us to doubt? If thou be the Christ, tell us plainly.

(*e*) A little while, and ye shall not see me: and again, a little while, and ye shall see me, because I go to the Father.

(*f*) When Jesus therefore saw her weeping.....he groaned in the spirit and was troubled.

VI. Explain fully, in each case stating what the context is:

(*a*) καὶ ἐδικαιώθη ἡ σοφία ἀπὸ τῶν τέκνων αὐτῆς.

(*b*) οὐχί, λέγω ὑμῖν· ἀλλ' ἐὰν μὴ μετανοήσητε, πάντες ὁμοίως ἀπολεῖσθε.

(*c*) ἰδοὺ γάρ, ἡ βασιλεία τοῦ Θεοῦ ἐντὸς ὑμῶν ἐστίν.

(*d*) ὁ πιστεύων εἰς ἐμέ, καθὼς εἶπεν ἡ γραφή, ποταμοὶ ἐκ τῆς κοιλίας αὐτοῦ ῥεύσουσιν ὕδατος ζῶντος.

(*e*) οὐκ ἔστι γεγραμμένον ἐν τῷ νόμῳ ὑμῶν, Ἐγὼ εἶπα, θεοί ἐστε;

(*f*) ἐὰν αὐτὸν θέλω μένειν ἕως ἔρχομαι, τί πρός σε; σύ μοι ἀκολούθει.

VII. Notice the chief various readings which present themselves in the following passages of the Received Text, contrasting as to sense the Received reading with those which you notice:

(*a*) τίς ἐκ τῶν δύο ἐποίησε τὸ θέλημα τοῦ πατρός; λέγουσιν Ὁ πρῶτος.

(*b*) ἀγαθοποιεῖτε, καὶ δανείζετε μηδὲν ἀπελπίζοντες.

(*c*) οὐχ ἁρπάσει τις αὐτὰ ἐκ τῆς χειρός μου. ὁ πατήρ μου ὃς δέδωκέ μοι, μείζων πάντων ἐστί.

(*d*) καὶ σύ, Καπερναούμ, ἡ ἕως τοῦ οὐρανοῦ ὑψωθεῖσα, ἕως ᾅδου καταβιβασθήσῃ.

(*e*) καὶ ἐὰν κρίνω δὲ ἐγώ, ἡ κρίσις ἡ ἐμὴ ἀληθής ἐστιν· ὅτι μόνος οὐκ εἰμί.

(*f*) ἄφες αὐτήν· εἰς τὴν ἡμέραν τοῦ ἐνταφιασμοῦ μου τετήρηκεν αὐτό.

MONDAY, *January* 7, 1884. 9—12.

THE ACTS, EPISTLES AND APOCALYPSE, WITH SPECIAL REFERENCE TO THE EPISTLE TO THE HEBREWS.

1. STATE precisely the accusation which was brought against St Stephen. Under what circumstances did St Paul defend himself against a like charge? State that charge and compare St Paul's defence with St Stephen's. Shew how the writer to the Hebrews deals with a spirit kindred to that which prompted those charges.

2. Trace carefully the history of Timothy so far as we can gather it from the Acts and Epistles.

3. What traces of the Neronian persecution are found in the New Testament?

4. What evidence for its authorship is supplied by personal references in the Epistle to the Hebrews?

5. Sketch the history of the reception of the Epistle to the Hebrews in the East and West, carefully discussing the evidence of Origen.

6. Translate with brief exegetical notes *five* of the following:

(α) Ὑμῖν ἦν ἀναγκαῖον πρῶτον λαληθῆναι τὸν λόγον τοῦ θεοῦ· ἐπειδὴ ἀπωθεῖσθε αὐτὸν καὶ οὐκ ἀξίους κρίνετε ἑαυτοὺς τῆς αἰωνίου ζωῆς, ἰδοὺ στρεφόμεθα εἰς τὰ ἔθνη· οὕτω γὰρ ἐντέταλται ἡμῖν ὁ κύριος Τέθεικά σε εἰς φῶς ἐθνῶν τοῦ εἶναί σε εἰς σωτηρίαν ἕως ἐσχάτου τῆς γῆς.

(β) καὶ τότε ἀποκαλυφθήσεται ὁ ἄνομος, ὃν ὁ κύριος Ἰησοῦς ἀνελεῖ τῷ πνεύματι τοῦ στόματος αὐτοῦ καὶ καταργήσει τῇ ἐπιφανείᾳ τῆς παρουσίας αὐτοῦ.

(γ) τολμᾷ τις ὑμῶν πρᾶγμα ἔχων πρὸς τὸν ἕτερον κρίνεσθαι ἐπὶ τῶν ἀδίκων, καὶ οὐχὶ ἐπὶ τῶν ἁγίων; ἢ οὐκ οἴδατε ὅτι οἱ ἅγιοι τὸν κόσμον κρινοῦσιν; καὶ εἰ ἐν ὑμῖν κρίνεται ὁ κόσμος, ἀνάξιοί ἐστε κριτηρίων ἐλαχίστων; οὐκ οἴδατε ὅτι ἀγγέλους κρινοῦμεν, μήτιγε βιωτικά; βιωτικὰ μὲν οὖν κριτήρια ἐὰν ἔχητε, τοὺς ἐξουθενημένους ἐν τῇ ἐκκλησίᾳ, τούτους καθίζετε; πρὸς ἐντροπὴν ὑμῖν λέγω.

(δ) ἀδελφοί, κατὰ ἄνθρωπον λέγω· ὅμως ἀνθρώπου κεκυρωμένην διαθήκην οὐδεὶς ἀθετεῖ ἢ ἐπιδιατάσσεται.

(ε) ἡμῶν γὰρ τὸ πολίτευμα ἐν οὐρανοῖς ὑπάρχει, ἐξ οὗ καὶ σωτῆρα ἀπεκδεχόμεθα κύριον Ἰησοῦν Χριστόν, ὃς μετασχηματίσει τὸ σῶμα τῆς ταπεινώσεως ἡμῶν σύμμορφον τῷ σώματι τῆς δόξης αὐτοῦ κατὰ τὴν ἐνέργειαν τοῦ δύνασθαι αὐτὸν καὶ ὑποτάξαι αὐτῷ τὰ πάντα.

(ζ) νεωτέρας δὲ χήρας παραιτοῦ· ὅταν γὰρ καταστρηνιάσωσιν τοῦ χριστοῦ, γαμεῖν θέλουσιν, ἔχουσαι κρίμα ὅτι τὴν πρώτην πίστιν ἠθέτησαν· ἅμα δὲ καὶ ἀργαὶ μανθάνουσιν, περιερχόμεναι τὰς οἰκίας, οὐ μόνον δὲ ἀργαὶ ἀλλὰ καὶ φλύαροι καὶ περίεργοι, λαλοῦσαι τὰ μὴ δέοντα.

(η) ἴδετε ποταπὴν ἀγάπην δέδωκεν ἡμῖν ὁ πατὴρ ἵνα τέκνα θεοῦ κληθῶμεν, καί ἐσμεν. διὰ τοῦτο ὁ κόσμος οὐ γινώσκει ἡμᾶς ὅτι οὐκ ἔγνω αὐτόν.

(θ) καὶ ἄλλος ἄγγελος ἦλθεν καὶ ἐστάθη ἐπὶ τοῦ θυσιαστηρίου ἔχων λιβανωτὸν χρυσοῦν, καὶ ἐδόθη αὐτῷ θυμιάματα πολλὰ ἵνα δώσει ταῖς προσευχαῖς τῶν ἁγίων πάντων ἐπὶ τὸ θυσιαστήριον τὸ χρυσοῦν τὸ ἐνώπιον τοῦ θρόνου.

7. Discuss the readings in the following passages:

(α) προσέχετε οὖν ἑαυτοῖς καὶ παντὶ τῷ ποιμνίῳ, ἐν ᾧ ὑμᾶς τὸ πνεῦμα τὸ ἅγιον ἔθετο ἐπισκόπους, ποιμαίνειν τὴν ἐκκλησίαν τοῦ θεοῦ, ἣν περιεποιήσατο διὰ τοῦ ἰδίου αἵματος.

(β) ὁ πρῶτος ἄνθρωπος ἐκ γῆς, χοϊκός· ὁ δεύτερος ἄνθρωπος ὁ κύριος ἐξ οὐρανοῦ.

(γ) Χριστὸς δὲ παραγενόμενος ἀρχιερεὺς τῶν μελλόντων ἀγαθῶν, διὰ τῆς μείζονος καὶ τελειοτέρας σκηνῆς, οὐ χειροποιήτου.

(δ) καὶ γὰρ τοῖς δεσμοῖς μου συνεπαθήσατε.

8. Examine the following quotations from the Old Testament with regard to their relation to (*a*) the wording, (*b*) the context of the original.

(α) καὶ προσκυνησάτωσαν αὐτῷ πάντες ἄγγελοι θεοῦ.

(β) Ὁ θρόνος σου ὁ θεὸς εἰς τὸν αἰῶνα τοῦ αἰῶνος, καὶ ἡ ῥάβδος τῆς εὐθύτητος ῥάβδος τῆς βασιλείας αὐτοῦ.

(γ) Ἐγὼ ἔσομαι πεποιθὼς ἐπ' αὐτῷ.

(δ) ὁ ἐρχόμενος ἥξει καὶ οὐ χρονίσει· ὁ δὲ δίκαιός μου ἐκ πίστεως ζήσεται, καὶ ἐὰν ὑποστείληται, οὐκ εὐδοκεῖ ἡ ψυχή μου ἐν αὐτῷ.

(ε) Ἔτι ἅπαξ ἐγὼ σείσω οὐ μόνον τὴν γῆν ἀλλὰ καὶ τὸν οὐρανόν.

Discuss the bearing of the quotations in the Epistle to the Hebrews upon the question of its authorship.

9. Give the original Greek of *six* of the following, noticing any defect in the rendering:

(*a*) He said unto them, Have ye received the Holy Ghost since ye believed? And they said unto him, We have not so much as heard whether there be any Holy Ghost.

(*b*) Whom God hath set forth to be a propitiation through faith in his blood, to declare his righteousness for the remission of sins that are past, through the forbearance of God.

(*c*) But ye have not so learned Christ; if so be that ye have heard him, and have been taught by him, as the truth is in Jesus.

(*d*) And Adam was not deceived, but the woman being deceived was in the transgression. Notwithstanding she shall be saved in childbearing, if they continue in faith and charity and holiness with sobriety.

(*e*) But we see Jesus, who was made a little lower than the angels for the suffering of death, crowned with glory and honour; that he by the grace of God should taste death for every man.

(*f*) For unto us was the Gospel preached, as well as unto them: but the word preached did not profit them, not being mixed with faith in them that heard it.

(*g*) Then verily the first covenant had also ordinances of divine service, and a worldly sanctuary.

(*h*) For ye know how that afterward, when he would have inherited the blessing, he was rejected: for he found no place of repentance, though he sought it carefully with tears.

10. Translate with short exegetical notes and briefly indicating the relation to the argument of the Epistle:

(*a*) *ὅθεν, ἀδελφοὶ ἅγιοι, κλήσεως ἐπουρανίου μέτοχοι, κατανοήσατε τὸν ἀπόστολον καὶ ἀρχιερέα τῆς ὁμολογίας ἡμῶν Ἰησοῦν, πιστὸν ὄντα τῷ ποιήσαντι αὐτὸν ὡς καὶ Μωυσῆς ἐν ὅλῳ τῷ οἴκῳ αὐτοῦ.*

Discuss the reading.

(*β*) *ἀδύνατον γὰρ τοὺς ἅπαξ φωτισθέντας γευσαμένους τε τῆς δωρεᾶς τῆς ἐπουρανίου καὶ μετόχους γενηθέντας πνεύματος ἁγίου καὶ καλὸν γευσαμένους θεοῦ ῥῆμα δυνάμεις τε μέλλοντος αἰῶνος, καὶ παραπεσόντας, πάλιν ἀνακαινίζειν εἰς μετάνοιαν, ἀνασταυροῦντας ἑαυτοῖς τὸν υἱὸν τοῦ θεοῦ καὶ παραδειγματίζοντας.*

(*γ*) *ἀθέτησις μὲν γὰρ γίνεται προαγούσης ἐντολῆς διὰ τὸ αὐτῆς ἀσθενὲς καὶ ἀνωφελές, οὐδὲν γὰρ ἐτελείωσεν ὁ νόμος, ἐπεισαγωγὴ δὲ κρείττονος ἐλπίδος, δι' ἧς ἐγγίζομεν τῷ θεῷ.*

(*δ*) *καὶ διὰ τοῦτο διαθήκης καινῆς μεσίτης ἐστίν, ὅπως θανάτου γενομένου εἰς ἀπολύτρωσιν τῶν ἐπὶ τῇ πρώτῃ διαθήκῃ παραβάσεων τὴν ἐπαγγελίαν λάβωσιν οἱ κεκλημένοι τῆς αἰωνίου κληρονομίας. ὅπου γὰρ διαθήκη, θάνατον ἀνάγκη φέρεσθαι τοῦ διαθεμένου· διαθήκη γὰρ ἐπὶ νεκροῖς βεβαία, ἐπεὶ μὴ τότε ἰσχύει ὅτε ζῇ ὁ διαθέμενος.*

Discuss the reading.

(*ε*) *βλέπετε μὴ παραιτήσησθε τὸν λαλοῦντα· εἰ γὰρ ἐκεῖνοι οὐκ ἐξέφυγον ἐπὶ γῆς παραιτησάμενοι τὸν χρηματίζοντα, πολὺ μᾶλλον ἡμεῖς οἱ τὸν ἀπ' οὐρανῶν ἀποστρεφόμενοι.*

11. Derive, discuss and illustrate the following words:

τελειοῦν—ἀδόκιμος—ἀνατέλλειν—ἀναφέρειν—εἰκών—ὑπόστασις—καταρτίζειν.

Distinguish between

ἅγιος, ὅσιος—κόσμος, αἰών—ἀπολύτρωσις, ἱλασμός.

12. Compare the teaching of the Epistle to the Hebrews with that of St Paul's Epistles in respect of (*a*) faith, (*b*) justification, (*c*) salvation, (*d*) the admission of the Gentiles to the Church, (*e*) the work of the Risen Lord.

MONDAY, *January* 7, 1884. 1—4.

ECCLESIASTICAL HISTORY OF THE FIRST SIX CENTURIES.

[Not more than *twelve* questions altogether are to be answered, and not more than *seven* in each group.]

A.

1. COMPARE the moral teaching of the Stoics of the first two centuries with that of Christianity.

2. "Quibus peractis morem sibi discedendi fuisse, rursusque coeundi ad capiendum cibum, promiscuum tamen et innoxium: quod ipsum facere desiisse post edictum meum, quo secundum mandata tua hetaerias esse uetueram."

Comment on the last clause. Examine briefly (*a*) the motives, (*b*) the extent of the persecutions prior to that of Decius.

3. Write an account of the recently discovered authorities for the text of Clement's Epistle. Give an outline of the contents of this epistle and discuss its bearing on the claims of the Papacy.

4. Translate, adding brief notes:

καὶ τοῦ μακαρίου Πολυκάρπου ἐπιδημήσαντος ἐν τῇ Ῥώμῃ ἐπὶ Ἀνικήτου, καὶ περὶ ἄλλων τινῶν μικρὰ σχόντες πρὸς ἀλλήλους εὐθὺς εἰρήνευσαν, περὶ τούτου τοῦ κεφαλαίου μὴ φιλεριστήσαντες εἰς ἑαυτούς. οὔτε γὰρ ὁ Ἀνίκητος τὸν Πολύκαρπον πεῖσαι ἐδύνατο μὴ τηρεῖν, ἅτε μετὰ Ἰωάνου τοῦ μαθητοῦ τοῦ κυρίου ἡμῶν, καὶ τῶν λοιπῶν ἀποστόλων οἷς συνδιέτριψεν, ἀεὶ τετηρηκότα, οὔτε μὴν ὁ Πολύκαρπος τὸν Ἀνίκητον ἔπεισε τηρεῖν, λέγοντα τὴν συνήθειαν τῶν πρὸ αὐτοῦ πρεσβυτέρων ὀφείλειν κατέχειν. καὶ τούτων οὕτως ἐχόντων, ἐκοινώνησαν ἑαυτοῖς καὶ ἐν τῇ ἐκκλησίᾳ παρεχώρησεν ὁ Ἀνίκητος τὴν εὐχαριστίαν τῷ Πολυκάρπῳ, κατ' ἐντροπὴν δηλόνοτι.

Trace the subsequent history of this controversy.

5. Contrast carefully the systems of Cerinthus and Marcion with regard to their (*a*) theory of the Creation, (*b*) Christology, (*c*) Eschatology.

6. Write an account of one of the Apologetic writings of the second or third century, pointing out (*a*) the author's view of pre-Christian philosophy, (*b*) the particular charges against Christianity which he combats.

7. Relate the life of Dionysius of Alexandria, giving a brief account of the controversies in which he took part.

8. Discuss the merits of Eusebius of Caesarea as a historian.

9. Translate and comment on the following passage, explaining the terminology.

οἴδαμεν ἕνα θεόν...γεννήσαντα υἱὸν μονογενῆ,...γέννημα, ἀλλ' οὐχ ὡς ἓν τῶν γεγεννημένων, οὐδ' ὡς Οὐαλεντῖνος προβολὴν τοῦ πατρὸς ἐδογμάτισεν· οὐδ' ὡς ὁ Μανιχαῖος μέρος ὁμοούσιον τοῦ πατρὸς τὸ γέννημα εἰσηγήσατο· οὐδ' ὡς Σαβέλλιος τὴν μονάδα διαιρῶν υἱοπάτορα εἶπεν.

B.

1. Sketch the history of the Christological controversy from the Council of Sardica to the death of Constantius. Define the doctrinal position of the several parties at the latter date.

2. Estimate the strength of Paganism in the Empire at the time of Julian's accession. Describe his educational policy.

3. Describe the social life of any one of the large cities of the Empire in the latter part of the fourth century.

4. Relate the history of Christian missions to (*a*) the Ethiopians, (*b*) the Goths.

5. Contrast the opinions of Augustine and Pelagius regarding (*a*) Freewill, (*b*) the effects of Adam's fall upon his posterity. What was the attitude of bishops of Rome towards the controversy during the lifetime of the former?

6. On what occasions, and with what results, did Leo the Great assert the supremacy of his see?

7. Write an account of the work of Benedict of Nursia and particularly his Rule.

8. Describe the structure and interior arrangements of churches in the fifth and sixth centuries.

9. Relate what is known of the history of Christianity in this island until the landing of Augustine.

TUESDAY, *January* 8, 1884. 9—12.

ISAIAH.

1. TRANSLATE the following passages carefully:

(*a*) בָּא עַל־עַיָּת עָבַר בְּמִגְרוֹן לְמִכְמָשׂ יַפְקִיד כֵּלָיו : עָבְרוּ מַעְבָּרָה גֶּבַע מָלוֹן לָנוּ חָרְדָה הָרָמָה גִּבְעַת שָׁאוּל נָסָה : צַהֲלִי קוֹלֵךְ בַּת־גַּלִּים הַקְשִׁיבִי לַיְשָׁה עֲנִיָּה עֲנָתוֹת : נָדְדָה מַדְמֵנָה יֹשְׁבֵי הַגֵּבִים הַעִיזוּ : עוֹד הַיּוֹם בְּנֹב לַעֲמֹד יִנְּפֹף יָדוֹ הַר בַּת־צִיּוֹן גִּבְעַת יְרוּשָׁלִָם : • בת ק

To what occasion does this passage refer?

Illustrate the constructions of צַהֲלִי קוֹלֵךְ, בְּנֹב לַעֲמֹד.

Point and translate עניה ענתות according to the Peshiṭtā.

(*b*) וְהָאֲזִנִיחוּ נְהָרוֹת דָּלְלוּ וְחָרְבוּ יְאֹרֵי מָצוֹר קָנֶה וָסוּף כָּמֵלוּ : עָרוֹת עַל־יְאוֹר עַל־פִּי יְאוֹר וְכֹל מִזְרַע יְאוֹר יִבַשׁ נִדַּף וְאֵינֶנּוּ : וְאָנוּ הַדַּיָּגִים וְאָבֵלוּ כָּל־מַשְׁלִיכֵי בַיְּאוֹר חַכָּה וּפֹרְשֵׂי מִכְמֹרֶת עַל־פְּנֵי־מַיִם אֻמְלָלוּ : וּבֹשׁוּ עֹבְדֵי פִּשְׁתִּים שְׂרִיקוֹת וְאֹרְגִים חוֹרָי : וְהָיוּ שָׁתֹתֶיהָ מְדֻכָּאִים כָּל־עֹשֵׂי שָׂכָר אַגְמֵי־נָפֶשׁ :

Comment on the forms הָאֲזִנִיחוּ and חוֹרָי.

Explain the apparent false concord involved in וְהָיוּ שָׁתֹתֶיהָ מְדֻכָּאִים.

(*c*) וְהִשְׁמִיעַ יְהוָה אֶת־הוֹד קוֹלוֹ וְנַחַת זְרוֹעוֹ יַרְאָה בְּזַעַף אַף וְלַהַב אֵשׁ אוֹכֵלָה נָפֶץ וְזֶרֶם וְאָבֶן בָּרָד : כִּי־מִקּוֹל יְהוָה יֵחַת אַשּׁוּר בַּשֵּׁבֶט יַכֶּה : וְהָיָה כֹּל מַעֲבַר מַטֵּה מוּסָדָה אֲשֶׁר יָנִיחַ יְהוָה עָלָיו בְּתֻפִּים וּבְכִנּוֹרוֹת וּבְמִלְחֲמוֹת תְּנוּפָה נִלָּחַם־בָּהּ : כִּי־עָרוּךְ מֵאֶתְמוֹל תָּפְתֶּה גַּם־הִוא לַמֶּלֶךְ הוּכָן הֶעֱמִיק הִרְחִיב מְדוּרָתָהּ אֵשׁ וְעֵצִים הַרְבֵּה נִשְׁמַת יְהוָה כְּנַחַל גָּפְרִית בֹּעֲרָה בָּהּ :

Discuss the meaning and derivation of תָּפְתֶּה.

(*d*) אֲנִי אָמַרְתִּי בִּדְמִי יָמַי אֵלֵכָה בְּשַׁעֲרֵי שְׁאוֹל פֻּקַּדְתִּי יֶתֶר שְׁנוֹתָי : אָמַרְתִּי לֹא־אֶרְאֶה יָהּ יָהּ בְּאֶרֶץ הַחַיִּים לֹא־אַבִּיט אָדָם עוֹד עִם־יוֹשְׁבֵי חָדֶל : דּוֹרִי נִסַּע וְנִגְלָה מִנִּי כְּאֹהֶל רֹעִי קִפַּדְתִּי כָּאֹרֶג חַיַּי מִדַּלָּה יְבַצְּעֵנִי מִיּוֹם עַד־לַיְלָה תַּשְׁלִימֵנִי : שִׁוִּיתִי עַד־בֹּקֶר כָּאֲרִי כֵּן יְשַׁבֵּר כָּל־עַצְמוֹתַי מִיּוֹם עַד־לַיְלָה תַּשְׁלִימֵנִי :

Explain בִּדְמִי יָמַי. Parse רֹעִי.

What various readings of חָדֶל, שִׁוִּיתִי are attested in manuscripts and versions?

(e) לוּא־קָרַעְתָּ שָׁמַיִם יָרַדְתָּ מִפָּנֶיךָ הָרִים נָזֹלוּ : כִּקְדֹחַ אֵשׁ הֶמְסִים מַיִם תִּבְעָה־אֵשׁ לְהוֹדִיעַ שִׁמְךָ לְצָרֶיךָ מִפָּנֶיךָ גּוֹיִם יִרְגָּזוּ : בַּעֲשׂוֹתְךָ נוֹרָאוֹת לֹא נְקַוֶּה יָרַדְתָּ מִפָּנֶיךָ הָרִים נָזֹלוּ : וּמֵעוֹלָם לֹא־שָׁמְעוּ לֹא הֶאֱזִינוּ עַיִן לֹא־רָאָתָה אֱלֹהִים זוּלָתְךָ יַעֲשֶׂה לִמְחַכֶּה־לוֹ : פָּגַעְתָּ אֶת־שָׂשׂ וְעֹשֵׂה צֶדֶק בְּדַרְכֶיךָ יִזְכְּרוּךָ הֵן־אַתָּה קָצַפְתָּ וַנֶּחֱטָא בָּהֶם עוֹלָם וְנִוָּשֵׁעַ : וַנְּהִי כַטָּמֵא כֻּלָּנוּ וּכְבֶגֶד עֲדִים כָּל־צִדְקֹתֵינוּ וַנִּבֹל כָּעָלֶה כֻּלָּנוּ וַעֲוֹנֵנוּ כָּרוּחַ יִשָּׂאוּנוּ :

Emend the above passage as you think fit.

2. Parse and explain the following forms:

נְגֵאֲלוּ—יַז—יַהֵל—יְיַלִּיל—יָחֹנֵךְ—אֲרוֹמָם—תִּשְׁתָּע—הַנַּחֲמִים.

3. Translate and explain fully, adding notes on peculiarities of syntax and on any important various readings attested in MSS. or versions:

(a) בַּיּוֹם הַהוּא יִהְיוּ חָמֵשׁ עָרִים בְּאֶרֶץ מִצְרַיִם מְדַבְּרוֹת שְׂפַת כְּנַעַן וְנִשְׁבָּעוֹת לַיהוָה צְבָאוֹת עִיר הַהֶרֶס יֵאָמֵר לְאָחָת :

(b) עָרֹךְ הַשֻּׁלְחָן צְפֹה הַצָּפִית אָכוֹל שְׁתֹה קוּמוּ הַשָּׂרִים מִשְׁחוּ מָגֵן :

(c) יֵצֶר סָמוּךְ תִּצֹּר שָׁלוֹם שָׁלוֹם כִּי בְךָ בָטוּחַ :

(d) מִי הָעִיר מִמִּזְרָח צֶדֶק יִקְרָאֵהוּ לְרַגְלוֹ יִתֵּן לְפָנָיו גּוֹיִם וּמְלָכִים יַרְדֶּ יִתֵּן כֶּעָפָר חַרְבּוֹ כְּקַשׁ נִדָּף קַשְׁתּוֹ :

(e) זִכְרוּ־זֹאת וְהִתְאֹשָּׁשׁוּ הָשִׁיבוּ פוֹשְׁעִים עַל־לֵב :

(f) שְׁתַּיִם הַנָּה קֹרְאֹתַיִךְ מִי יָנוּד לָךְ הַשֹּׁד וְהַשֶּׁבֶר וְהָרָעָב וְהַחֶרֶב מִי אֲנַחֲמֵךְ :

(g) בְּרֹב דַּרְכֵךְ יָגַעְתְּ לֹא אָמַרְתְּ נוֹאָשׁ חַיַּת יָדֵךְ מָצָאת עַל־כֵּן לֹא חָלִית :

(h) וְאָבוּס עַמִּים בְּאַפִּי וַאֲשַׁכְּרֵם בַּחֲמָתִי וְאוֹרִיד לָאָרֶץ נִצְחָם :

4. Retranslate into HEBREW:

(a) Come now, and let us reason together, saith the LORD: though your sins be as scarlet, they shall be as white as snow; though they be red like crimson, they shall be as wool.

(b) For unto us a child is born, unto us a son is given: and the government shall be upon his shoulder: and his name shall be called Wonderful, Counseller, The mighty God, The everlasting Father, The Prince of Peace.

(c) I am sought of them that asked not for me; I am found of them that sought me not: I said, Behold me, behold me, unto a nation that was not called by my name.

5. Point the following passage, marking methegh, and indicating wherever the tone falls on the penultimate:

עניה סערה לא נחמה הנה אנכי מרביץ בפוך אבניך ויסדתיך בספירים: ושמתי כדכד שמשתיך ושעריך לאבני אקדח וכל גבולך לאבני חפץ: וכל בניך למודי יהוה ורב שלום בניך: בצדקה תכונני רחקי מעשק כי לא תיראי וממחתה כי לא תקרב אליך: הן גור יגור אפס מאותי מי גר אתך עליך יפול: הן אנכי בראתי חרש נפח באש פחם ומוציא כלי למעשהו ואנכי בראתי משחית לחבל: כל כלי יוצר עליך לא יצלח וכל לשון תקום אתך למשפט תרשיעי זאת נחלת עבדי יהוה וצדקתם מאתי נאם יהוה:

6. What mention is made of the following in the book of Isaiah?

Rezin, the son of Tabeal, Kir-hareseth, Tartan, Ariel, Shebna, Merodach-Baladan.

7. Explain the following, and state the context in which each occurs:

אֲרִיאֵלָם—גּוֹי קַו קַו וּמְבוּסָה—בָּתֵּי הַנָּפֶשׁ—לחפר פרות—מְגִי—פְּקֹדֻקוֹחַ—מְשֻׁלָּם—צֹעָה

viii. Add vowel-points and principal accents to the following passage:

ויאסף יהושע את כל שבטי ישראל שכמה ויקרא לזקני ישראל ולראשיו ולשפטיו ולשטריו ויתיצבו לפני האלהים: ויאמר יהושע אל כל העם כה אמר יהוה אלהי ישראל בעבר הנהר ישבו אבותיכם מעולם תרח אבי אברהם ואבי נחור ויעבדו אלהים אחרים:

ix. What various aspects of the prophetic office may be illustrated by the introductory chapters (I—IV) of the prophecy of Isaiah?

x. Enumerate and compare the several expressions used in the Old Testament for any form of divine revelation. What features of the book of Isaiah may be due to its communication as a חָזוֹן?

xi. What appears to have been the purpose of the revelations made to Israel through their prophets concerning the nations round about? Illustrate your answer from the 'Burden of Moab' and the 'Burden of Dumah.' Write a brief notice of the word מַשָּׂא.

xii. Translate, with short notes where they seem needed:

(a) בֵּן יְכַבֵּד אָב וְעֶבֶד אֲדֹנָיו וְאִם־אָב אָנִי אַיֵּה כְבוֹדִי וְאִם־אֲדוֹנִים
אָנִי אַיֵּה מוֹרָאִי אָמַר יְהוָה צְבָאוֹת לָכֶם הַכֹּהֲנִים בּוֹזֵי שְׁמִי וַאֲמַרְתֶּם בַּמָּה בָזִינוּ
אֶת־שְׁמֶךָ : מַגִּישִׁים עַל־מִזְבְּחִי לֶחֶם מְגֹאָל וַאֲמַרְתֶּם בַּמָּה גֹּאַלְנוּךָ בְּאָמְרְכֶם שֻׁלְחַן
יְהוָה נִבְזֶה הוּא : וְכִי־תַגִּישׁוּן עִוֵּר לִזְבֹּחַ אֵין רָע וְכִי תַגִּישׁוּ פִּסֵּחַ וְחֹלֶה אֵין
רָע הַקְרִיבֵהוּ נָא לְפֶחָתֶךָ הֲיִרְצְךָ אוֹ הֲיִשָּׂא פָנֶיךָ אָמַר יְהוָה צְבָאוֹת :

Whence is this passage taken?

Compare it with Isaiah's language concerning the sacrificial worship of his time.

(b) כִּי כֹה אָמַר יְהוָה צְבָאוֹת עוֹד אַחַת מְעַט הִיא וַאֲנִי מַרְעִישׁ אֶת־
הַשָּׁמַיִם וְאֶת־הָאָרֶץ וְאֶת־הַיָּם וְאֶת־הַחָרָבָה : וְהִרְעַשְׁתִּי אֶת־כָּל־הַגּוֹיִם וּבָאוּ חֶמְדַּת
כָּל־הַגּוֹיִם וּמִלֵּאתִי אֶת־הַבַּיִת הַזֶּה כָּבוֹד אָמַר יְהוָה צְבָאוֹת : לִי הַכֶּסֶף וְלִי
הַזָּהָב נְאֻם יְהוָה צְבָאוֹת : גָּדוֹל יִהְיֶה כְּבוֹד הַבַּיִת הַזֶּה הָאַחֲרוֹן מִן־הָרִאשׁוֹן
אָמַר יְהוָה צְבָאוֹת וּבַמָּקוֹם הַזֶּה אֶתֵּן שָׁלוֹם נְאֻם יְהוָה צְבָאוֹת :

Explain the connexion of this whole passage, and illustrate it from Isaiah's prophecy.

TUESDAY, *January* 8, 1884. 1—4.

HOSEA.

1. STATE the various explanations which have been given to the narrative in chapters i—iii. Point out the difficulties that attend on each of them, and from a comparison with other parts of the Old or New Testament shew which seems the most satisfactory.

2. Translate:

(a) 15 אִם־זֹנָה אַתָּה יִשְׂרָאֵל אַל־יֶאְשַׁם יְהוּדָה וְאַל־תָּבֹאוּ הַגִּלְגָּל וְאַל־תַּעֲלוּ
בֵּית אָוֶן וְאַל־תִּשָּׁבְעוּ חַי־יְהוָה : 16 כִּי כְּפָרָה סָרָרָה סָרַר יִשְׂרָאֵל עַתָּה יִרְעֵם
יְהוָה כְּכֶבֶשׂ בַּמֶּרְחָב : 17 חֻבּוּר עֲצַבִּים אֶפְרַיִם הַנַּח־לוֹ : 18 סָר סִבְאָם הִזְנָה
הִזְנוּ אָהֲבוּ הָבוּ קָלוֹן מָגִנָּיהָ : 19 צָרַר רוּחַ אוֹתָהּ בִּכְנָפֶיהָ וְיֵבֹשׁוּ מִזִّבְחוֹתָם :

Explain in verse 16, כְּכֶבֶשׂ בַּמֶּרְחָב.

For verses 17 and 18 (to the Athnach) the LXX. give *μέτοχος εἰδώλων Ἐφραὶμ ἔθηκεν ἑαυτῷ σκάνδαλα, ἠρέτισε Χαναναίους·*

How has this rendering been arrived at?

Discuss the grammar and sense of the latter part of verse 18, and illustrate the meaning you give to מְנִיָּה from other parts of the Bible. The LXX. translate the word *ἐκ φρυάγματος αὐτῆς*. Account for this.

(b) 4 כֻּלָּם מְנַאֲפִים כְּמוֹ תַנּוּר בֹּעֵרָה מַאֹפֶה יִשְׁבּוֹת מֵעִיר מִלּוּשׁ בָּצֵק
עַד־חֻמְצָתוֹ׃ 5 יוֹם מַלְכֵּנוּ הֶחֱלוּ שָׂרִים חֲמַת מִיַּיִן מָשַׁךְ יָדוֹ אֶת־לֹצְצִים׃
6 כִּי־קֵרְבוּ כַתַּנּוּר לִבָּם בְּאָרְבָם כָּל־הַלַּיְלָה יָשֵׁן אֹפֵם בֹּקֶר הוּא בֹּעֵר כְּאֵשׁ
לָהָבָה׃ 7 כֻּלָּם יֵחַמּוּ כַּתַּנּוּר וְאָכְלוּ אֶת־שֹׁפְטֵיהֶם כָּל־מַלְכֵיהֶם נָפָלוּ אֵין־קֹרֵא
בָהֶם אֵלָי׃

Explain the construction of the first clause of ver. 5.

How is it rendered by the LXX.?

Give a paraphrase of the whole passage so as to bring out its full meaning.

(c) 5 לְעֶגְלוֹת בֵּית אָוֶן יָגוּרוּ שֹׁכֵן שֹׁמְרוֹן כִּי־אָבַל עָלָיו עַמּוֹ וּכְמָרָיו עָלָיו
יָגִילוּ עַל־כְּבוֹדוֹ כִּי־גָלָה מִמֶּנּוּ׃ 6 גַּם־אוֹתוֹ לְאַשּׁוּר יוּבָל מִנְחָה לְמֶלֶךְ יָרֵב
בָּשְׁנָה אֶפְרַיִם יִקָּח וְיַבּוֹשׁ יִשְׂרָאֵל מֵעֲצָתוֹ׃ 7 נִדְמָה שֹׁמְרוֹן מַלְכָּהּ כְּקֶצֶף עַל־
פְּנֵי־מָיִם׃ 8 וְנִשְׁמְדוּ בָּמוֹת אָוֶן חַטַּאת יִשְׂרָאֵל קוֹץ וְדַרְדַּר יַעֲלֶה עַל־מִזְבְּחוֹתָם
וְאָמְרוּ לָהָרִים כַּסּוּנוּ וְלַגְּבָעוֹת נִפְלוּ עָלֵינוּ׃

In verse 5, כִּי אָבַל עָלָיו עַמּוֹ; to what do the pronouns refer?

What is known of the כְּמָרִים and where else are they mentioned?

What explanations have been given of מֶלֶךְ יָרֵב?

3. Translate the Hebrew and comment on the LXX. rendering of the following verses.

(a) בְּחַבְלֵי אָדָם אֶמְשְׁכֵם בַּעֲבֹתוֹת אַהֲבָה וָאֶהְיֶה לָהֶם כִּמְרִימֵי עֹל עַל
לְחֵיהֶם וְאַט אֵלָיו אוֹכִיל׃

ἐν διαφθορᾷ ἀνθρώπων ἐξέτεινα αὐτοὺς ἐν δεσμοῖς ἀγαπήσεώς μου, καὶ ἔσομαι αὐτοῖς ὡς ῥαπίζων ἄνθρωπος ἐπὶ τὰς σιαγόνας αὐτοῦ· καὶ ἐπιβλέψομαι πρὸς αὐτὸν, δυνήσομαι αὐτῷ.

(b) שִׁחֲתְךָ יִשְׂרָאֵל כִּי־בִי בְעֶזְרֶךָ׃

τῇ διαφθορᾷ σου Ἰσραὴλ τίς βοηθήσει;

(e) קְחוּ עִמָּכֶם דְּבָרִים וְשׁוּבוּ אֶל־יְהוָה אִמְרוּ אֵלָיו כָּל־תִּשָּׂא עָוֹן וְקַח־טוֹב וְנְשַׁלְּמָה פָרִים שְׂפָתֵינוּ׃

λάβετε μεθ' ἑαυτῶν λόγους, καὶ ἐπιστράφητε πρὸς Κύριον τὸν Θεὸν ὑμῶν· εἴπατε αὐτῷ, ὅπως μὴ λάβητε ἀδικίαν, καὶ λάβητε ἀγαθὰ, καὶ ἀνταποδώσομεν καρπὸν χειλέων ἡμῶν.

4. Draw out from the language of this prophet a description of the condition of the Northern Kingdom in his time.

5. Hosea makes frequent use of paronomasia, and employs words in unusual senses and conjunctions. Give examples of this.

6. Write notes on the form or usage of

יִפְרִיא—קָחֶם—וַיִּזְּרוּ—יְיַלִּילוּ—אַיְסִירֵם—וְאַמְאַסְאֵךְ

PSALMS. BOOK V.

1. Translate the following passages:

(a) אוֹדְךָ עַל כִּי נוֹרָאוֹת נִפְלֵיתִי נִפְלָאִים מַעֲשֶׂיךָ וְנַפְשִׁי יֹדַעַת מְאֹד׃ לֹא־נִכְחַד עֶצְמִי מִמְּךָ אֲשֶׁר־עָשִׂיתִי בַסָּתֶר רֻקַּמְתִּי בְּתַחְתִּיּוֹת אָרֶץ׃ גָּלְמִי רָאוּ עֵינֶיךָ וְעַל־סִפְרְךָ כֻּלָּם יִכָּתֵבוּ יָמִים יָצָרוּ וְלֹא אֶחָד בָּהֶם׃

Translate the last verse according to the Qrî.

How did the LXX. read נוֹרָאוֹת נִפְלֵיתִי?

Account for their rendering of רֻקַּמְתִּי (*καὶ ἡ ὑπόστασίς μου*).

(b) אֲשֶׁר בָּנֵינוּ כִּנְטִעִים מְגֻדָּלִים בִּנְעוּרֵיהֶם בְּנוֹתֵינוּ כְּזָוִיֹת מְחֻטָּבוֹת תַּבְנִית הֵיכָל׃ מְזָוֵינוּ מְלֵאִים מְפִיקִים מִזַּן אֶל־זַן צֹאנֵנוּ מַאֲלִיפוֹת מְרֻבָּבוֹת בְּחוּצוֹתֵינוּ׃ אַלּוּפֵינוּ מְסֻבָּלִים אֵין פֶּרֶץ וְאֵין יוֹצֵאת וְאֵין צְוָחָה בִּרְחֹבֹתֵינוּ׃

Discuss the meaning of אַלּוּפֵינוּ מְסֻבָּלִים. How are the words rendered in the Targum, how in the LXX., and how by most modern scholars?

Account for the LXX. renderings of כְּזָוִיֹת, מִזַּן אֶל זַן, and for Aquila's rendering of מְחֻטָּבוֹת (*διεσκεδασμένα*).

2. Explain with reference to the Hebrew original:

(a) *λέβης τῆς ἐλπίδος μου.*

(b) *συστήσασθε ἑορτὴν ἐν τοῖς πυκάζουσιν.*

(c) *ἐνύσταξεν ἡ ψυχή μου ἀπὸ ἀκηδίας.*

(d) *διηγήσαντό μοι παράνομοι ἀδολεσχίας.*

(*e*) *οἱ υἱοὶ τῶν ἐκτετιναγμένων. Μακάριος ὃς πληρώσει τὴν ἐπιθυμίαν αὐτοῦ ἐξ αὐτῶν.*

(*f*) *ὅτι ἐμεγάλυνας ἐπὶ πᾶν τὸ ὄνομα τὸ ἅγιόν σου.*

(*g*) *ἄρα σκότος καταπατήσει με, καὶ νὺξ φωτισμὸς ἐν τῇ τρυφῇ μου.*

(*h*) *ἐμοὶ δὲ λίαν ἐτιμήθησαν οἱ φίλοι σου ὁ Θεός, λίαν ἐκραταιώθησαν αἱ ἀρχαὶ αὐτῶν.*

3. Analyse and comment on the following forms:

תּוֹלָלֵינוּ—אֲסַפֵּק—אֲמִילֵם—יִמַּח—יֻיַּדַע—תְּעַר—צָרְתָּה—אַדְאַלֵּי—תַּגְמוּלוֹהִי—הַמַּעֲבִידִי

4. Retranslate the following into Hebrew, correcting the English where you think necessary:

(*a*) Awake psaltery and harp: I *myself* will awake early.

(*b*) I will lift up mine eyes unto the hills, from whence cometh my help.

(*c*) Jerusalem is builded as a city that is compact together.

(*d*) Let the righteous smite me; it shall be a kindness: and let him reprove me; it shall be an excellent oil, which shall not break my head.

5. Point the following:

לדוד מזמור נאם יהוה לאדני שב לימיני עד אשית איביך הדם לרגליך :
מטה עזך ישלח יהוה מציון רדה בקרב איביך : עמך נדבת ביום חילך
בהדרי קדש מרחם משחר לך טל ילדתך : נשבע יהוה ולא ינחם אתה כהן
לעולם על דברתי מלכי צדק : אדני על ימינך מחץ ביום אפו מלכים : ידין
בגוים מלא גויות מחץ ראש על ארץ רבה : מנחל בדרך ישתה על כן ירים
ראש :

How did Symmachus read בהדרי־קדש? Explain the last verse.

6. *Οἱ ἀδελφοί μου καλοὶ καὶ μεγάλοι, καὶ οὐκ εὐδόκησεν ἐν αὐτοῖς Κύριος.*

Whence is this extract taken? In what versions does the whole passage appear?

7. Translate the following:

(*a*) וְדָרְשׁוּ מַחֲרִבוֹתֵיהֶם :

Account for the LXX rendering: *ἐκβληθήτωσαν ἐκ τῶν οἰκοπέδων αὐτῶν.*

(*b*) עַד אֲשֶׁר יִרְאֶה בְצָרָיו :

(*c*) וּבְיָמַי אֶקְרָא :

(*d*) הָיִיתִי כְּנֹאד בְּקִיטוֹר :

Account for the LXX rendering: *ἐγενήθην ὡς ἀσκὸς ἐν πάχνῃ.*

(*e*) מְצָאנוּהָ בִּשְׂדֵה יָעַר :

To what circumstances does this refer?

WEDNESDAY, *January* 9, 1884. 9—12.

CREEDS.

I. ENUMERATE the principal Greek and Latin names for Creeds and doctrinal formularies of all kinds, and distinguish the sense or senses of each.

Translate with notes:

Διὰ τοῦτο καὶ ἡ τῆς πίστεως διδασκαλία καὶ αἱ εἰς αὐτὴν ἐξηγήσεις γίνονται. Πρὸ δὲ τῆς εἰς τὴν πίστιν παραδόσεως καλῶς ἔχειν μοι δοκεῖ νῦν ἀνακεφαλαιώσει συντόμῳ χρήσασθαι τῶν ἀναγκαίων δογμάτων, ἵνα μὴ τὸ πλῆθος τῶν λεχθησομένων καὶ τὸ μεταξὺ διάστημα τῶν ἡμερῶν τῆς τεσσερακοστῆς ἁπάσης λήθην ἐμποιήσῃ τῶν ἐν ἡμῖν ἀφελεστέρων τῇ διανοίᾳ, ἀλλ' ἵνα νῦν κεφαλαιωδῶς κατασπείραντες μὴ ἐπιλαθώμεθα τῶν αὐτῶν πλατύτερον γεωργουμένων ὕστερον.

II. Mention any Scriptural phrases occurring in one or more early Creeds, but absent from the Creeds of the West and the Greek East in their final forms; noticing any of these phrases which survive in the Creeds of other communions. Explain fully the origin and meaning of *παντοκράτωρ* as a theological term, and distinguish it from other similar words. Where is it used in the New Testament, and in what contexts?

III. In what formularies does the phrase *πρὸ πάντων τῶν αἰώνων ἐκ τοῦ πατρὸς γεγεννημένον* (*γεννηθέντα*) occur? What do you suppose to be its origin? In what various senses was it understood in ancient times? Can you account for its being left untouched in its ambiguity during the controversies of the fourth century? Mention any other phrases occurring in Creeds, apparently intended to express or suggest a similar meaning.

IV. Sketch briefly the history of the doctrine of the Holy Spirit during the fourth century, so far as it is illustrated by existing formularies. In what sense can Marcellus be said to have taught the Double Procession? Mention any examples of the theological use of *ἐκπορεύομαι* not applied to the Holy Spirit.

V. Describe the chief characteristics of the Creed attributed to Lucianus, and point out what it has in common with the formulary attributed to Gregory of Neocæsarea. Through what channels have these two formularies been transmitted to us?

VI. State briefly what is known of the history of the 'Constantinopolitan' Creed after the year 381.

VII. Mention the characteristic points of interest in the Creeds used by Faustus of Reii, by Pirminius, and in the Bangor Antiphonary, and any distinctive peculiarity of early Spanish Creeds. Discuss the question whether the Western Creed in its completed form was carried from Rome to other countries or *vice versa*.

VIII. Describe clearly but briefly the evidence which fixes the time at which the *Quicunque vult* came into wide circulation. Who are the earliest writers that use any language nearly identical with such phrases of this formulary as do not occur in any form of the 'Apostles'' Creed or any Eastern Creed, and to which of the clauses do they thus supply parallels?

CONFESSIONS OF THE SIXTEENTH AND SEVENTEENTH CENTURIES.

1. GIVE a brief account of the documents which contain authoritative statements of the faith of the Lutheran and 'Reformed' Communions. Under what circumstances were they put forth? By what minds were they mainly influenced?

2. What is the history of the XIII Articles of 1538? What importance do they possess in relation to the sources of the Edwardine and Elizabethan Articles? Shew from the title and contents of the XLII Articles and contemporary statements the design with which they were framed.

3. 'Sed tota controversia est, utrum corruptio naturae ac praesertim concupiscentia per se et natura sua, qualis invenitur etiam in baptizatis et iustificatis, sit proprie peccatum originale.'

Give in their own words as far as may be the answer given to this question by the several religious bodies. Shew carefully the intimate connexion of the answer with the whole system of the body which gives it.

4. 'Neque ita asserendum esse Christum Deum, ut eum negemus esse hominem.'

What opinion does this statement gainsay? Give some account of the controversy respecting it and of the issues depending on it.

5. 'Mihi vide, an non mera logica pugna sit, si disputetur an fides, quae est viva, an fides quâ est viva, requiratur ad iustificationem?'

Illustrate from the Confessions these two views of what is requisite for justification. How does the Council of Trent define justification? How does the Tridentine conception of faith differ from that which is set forth in the Confession of Augsburg?

6. Write out the present English Article "Of the Church" and compare with it the Roman and Lutheran definitions.

7. What phases has the Quinquarticular controversy passed through? What is the position of the Church of England regarding it?

8. Give *either* (*a*) an outline of the views held by the Polish Socinians, and of the document in which they are embodied; *or* (*b*) some account of the origin and constitution of the Westminster Assembly and of the distinctive features of the Confession which it drew up.

WEDNESDAY, *January* 9, 1884. 1—4.

LITURGIOLOGY.

1. TRANSLATE:

ὡς γὰρ ἀπὸ γῆς ἄρτος προσλαμβανόμενος τὴν ἔκκλησιν τοῦ Θεοῦ οὐκέτι κοινὸς ἄρτος ἐστὶν, ἀλλ' εὐχαριστία, ἐκ δύο πραγμάτων συνεστηκυῖα, ἐπιγείου τε καὶ ἐπουρανίου· οὕτως καὶ τὰ σώματα ἡμῶν, μεταλαμβάνοντα τῆς εὐχαριστίας, μηκέτι εἶναι φθαρτὰ, τὴν ἐλπίδα τῆς εἰς αἰῶνας ἀναστάσεως ἔχοντα.

Illustrate from the writings of Justin Martyr and other passages of Irenaeus the use of *εὐχαριστία*. Correct *ἔκκλησιν*.

2. *τὰ τῆς ἐπικλήσεως ῥήματα ἐπὶ τῇ ἀναδείξει τοῦ ἄρτου τῆς εὐχαριστίας καὶ τοῦ ποτηρίου τῆς εὐλογίας τίς τῶν ἁγίων ἐγγράφως ἡμῖν καταλέλοιπεν;*

Examine the bearing of these words of St Basil on the question of extempore prayer in the Eucharistic Service. What words of Justin, Cyprian, and Tertullian have been thought to shew that such mode of prayer was primitive?

3. Translate:

Deinde post sanctificationem sacrificii Dei, quia nos ipsos voluit esse sacrificium suum...ecce ubi est peracta sanctificatio dicimus Orationem Dominicam, quam accepistis et reddidistis. Post ipsam dicitur *Pax vobiscum*, et osculantur se Christiani in osculo sancto. S. AUGUSTINUS, *Sermo ad Infantes*.

Remark on the order of the Service here indicated, and compare it with that which obtained elsewhere. What further information does St Augustine give us about this part of the Service?

4. 'Ut nemo in precibus vel Patrem pro Filio, vel Filium pro Patre nominet; et cum altari assistitur semper ad Patrem dirigatur oratio.'

Where and when was this statute made? Shew from the Liturgies how far it was observed.

5. What early precedent have we for the Exhortation to the Communicants? Remark on the names by which it was known.

6. Trace through ancient and modern Eucharistic Liturgies the place occupied by Intercession. Give St Augustine's explanation of the words *παρακαλῶ οὖν πρῶτον πάντων ποιεῖσθαι κ.τ.λ.* (1 Tim. ii. 1.)

7. Trace the history of the 'Gloria in Excelsis,' and remark on its position in ancient and modern Liturgies.

8. What origin has been assigned to the Liturgy of the early British Church? How were the rites of the English Church brought under the same influence?

9. Trace the use of hymns and metrical Psalms in Divine Service in different communions. What impulse was given to it in the fourth century?

10. What do we learn from St Basil about Daily Services in his time? Describe the evidence on which they have been supposed to be connected with the Services of the Synagogue, and state what you know about their introduction into the Western Church.

11. Compare the Scotch, English and American Orders of the administration of Holy Communion, and account historically for their differences.

12. What provision has been made from time to time in different places for the public reading of Holy Scripture in the Church?

13. Give some account of the Services in the Sarum Manual upon which 'The Ministration of Public Baptism of Infants' is based. Compare the Service as it stood in 1549 with the present form.

14. Compare the present English Form for the Ordering of Priests with that in the Sarum Pontifical. Trace briefly the history of the reformed English Ordinal.

15. Examine the structure and origin of Collects, and the meaning of the word. Give examples from the Prayer-Book of Collects which are in their present or were in their original form addressed to God the Son. Quote in Latin the prayers '*O God who shewest to them that be in error*,' '*Assist us mercifully O Lord*,' and '*O God whose nature and property*,' indicating their primary intention. Mention any Collects composed in 1549.

16. Examine the influence exercised upon the Book of Common Prayer by the liturgical work of Bishop Cosin.

THURSDAY, *January* 10, 1884. 9—12.

GREEK ECCLESIASTICAL WRITERS.

THE SEVEN IGNATIAN EPISTLES.

1. TRACE the probable route by which Ignatius was conducted to Rome, noticing any incidents that can be fixed to particular localities, and briefly mentioning the evidence throughout. What is the bearing of the determination of this route on (1) the authenticity of the Seven Epistles, (2) the genuineness of either or both Martyrdoms?

2. Discuss briefly the evidence available for determining the reign in which Ignatius suffered martyrdom. Draw out the personal characteristics of Polycarp, so far as they can be gathered from the Ignatian Epistles, and give an account of his part in the collecting of the Epistles.

3. State precisely the doctrines of the false teachers condemned in the Ignatian Epistles, and discuss the question whether the false teachers chiefly condemned in them were identical with the Jewish teachers to whom reference is made. Enumerate and classify the various subjects with which the Epistles identify [ἡ] σὰρξ [τοῦ κυρίου] Ἰησοῦ [Χριστοῦ] κ.τ.λ.

4. Illustrate in detail the Ignatian conception of the episcopal office, pointing out what elements of the conception of the episcopal office prevalent in the fourth century are apparently absent from these Epistles. State precisely the evidence which they afford as to the relations of presbyters and deacons respectively to the bishop.

5. Translate with notes

Ἐπεὶ εὐξάμενος θεῷ ἐπέτυχον ἰδεῖν ὑμῶν τὰ ἀξιόθεα πρόσωπα, ὡς καὶ πλέον ἠτούμην λαβεῖν,—δεδεμένος γὰρ ἐν Χριστῷ Ἰησοῦ ἐλπίζω ὑμᾶς ἀσπάσασθαι, ἐάνπερ θέλημα ᾖ τοῦ ἀξιωθῆναί με εἰς τέλος εἶναι. ἡ μὲν [γὰρ] ἀρχὴ εὐοικονόμητός ἐστιν, ἐάνπερ χάριτος ἐπιτύχω, εἰς τὸ τὸν κλῆρόν μου ἀνεμποδίστως ἀπολαβεῖν. φοβοῦμαι γὰρ τὴν ὑμῶν ἀγάπην, μὴ αὐτή με ἀδικήσῃ· ὑμῖν γὰρ εὐχερές ἐστιν ὃ θέλετε ποιῆσαι, ἐμοὶ δὲ δύσκολόν ἐστιν τοῦ θεοῦ ἐπιτυχεῖν, ἐάνπερ ὑμεῖς μὴ φείσησθέ μου. οὐ γὰρ θέλω ὑμᾶς ἀνθρωπαρεσκῆσαι ἀλλὰ θεῷ ἀρέσαι, ὥσπερ καὶ ἀρέσκετε. οὐ γὰρ ἐγὼ ποτὲ ἕξω καιρὸν τοιοῦτον θεοῦ ἐπιτυχεῖν, οὔτε ὑμεῖς, ἐὰν σιωπήσητε, κρείττονι ἔργῳ ἔχετε ἐπιγραφῆναι. ἐὰν γὰρ σιωπήσητε ἀπ' ἐμοῦ, λόγος γενήσομαι θεοῦ· ἐὰν δὲ ἐρασθῆτε τῆς σαρκός μου, πάλιν ἔσομαι ἠχώ. πλέον μοι μὴ παράσχησθε τοῦ σπονδισθῆναι θεῷ, ὡς ἔτι θυσιαστήριον ἕτοιμόν ἐστιν, ἵνα ἐν ἀγάπῃ χόρος γενόμενοι ᾄσητε τῷ πατρὶ ἐν Χριστῷ Ἰησοῦ, ὅτι τὸν ἐπίσκοπον Συρίας ὁ θεὸς κατηξίωσεν εὑρεθῆναι εἰς δύσιν, ἀπὸ ἀνατολῆς μεταπεμψάμενος. καλὸν τὸ δῦναι ἀπὸ κόσμου πρὸς θεόν, ἵνα εἰς αὐτὸν ἀνατείλω.

How would the sense be affected if μή in line 7 were omitted with some good authorities? Discuss the text of lines 9, 10 (ἐὰν γὰρ...ἠχώ).

Enumerate the documentary authorities for the text of the Ignatian Epistle to the Romans, and state what you know of their mutual relations.

6. Translate and explain

(1) γεννητὸς καὶ ἀγέννητος.

(2) τὸ ἀδιάκριτον ἡμῶν ζῆν.

(3) πάροδός ἐστε τῶν εἰς θεὸν ἀναιρουμένων.

(4) ἀρχὴν δὲ ἐλάμβανεν τὸ παρὰ θεῷ ἀπηρτισμένον.

(5) διὰ τοῦτο ὃν δικαίως ἀνέμενον παρὼν ἤγειρεν αὐτοὺς ἐκ νεκρῶν.

(6) οὐ κατὰ χρῆσιν ἀλλὰ κατὰ φύσιν.

(7) δέον οὖν αὐτοὺς φυλάσσεσθαι τὰ ἐγκλήματα ὡς πῦρ.

(8) ὁ ἐμὸς ἔρως ἐσταύρωται, καὶ οὐκ ἔστιν ἐν ἐμοὶ πῦρ φιλόϋλον.

(9) ἐγὼ μὲν οὖν τὸ ἴδιον ἐποίουν, ὡς ἄνθρωπος εἰς ἕνωσιν κατηρτισμένος.

(10) ἵνα συνδοξάσῃ τὴν κατὰ θεὸν αὐτοῖς γενομένην εὐδίαν.

(11) κατὰ πάντα σου ἀντίψυχον ἐγὼ καὶ τὰ δεσμά μου ἃ ἠγάπησας.

(12) ἐὰν καυχήσηται ἀπώλετο, καὶ ἐὰν γνωσθῇ πλέον τοῦ ἐπισκόπου ἔφθαρται.

ATHANASII ORATIO I CONTRA ARIANOS.

1. TRANSLATE with explanatory notes:

(a) Τῇ μὲν φύσει, ὥσπερ πάντες, οὕτω καὶ αὐτὸς ὁ Λόγος ἐστὶ τρεπτὸς, τῷ δὲ ἰδίῳ αὐτεξουσίῳ, ἕως βούλεται, μένει καλός· ὅτε μέντοι θέλει, δύναται τρέπεσθαι καὶ αὐτὸς ὥσπερ καὶ ἡμεῖς, τρεπτῆς ὢν φύσεως. Διὰ τοῦτο γὰρ, φησὶ, καὶ προγινώσκων ὁ Θεὸς ἔσεσθαι καλὸν αὐτὸν, προλαβὼν αὐτῷ ταύτην τὴν δόξαν δέδωκεν, ἣν ἄνθρωπος καὶ ἐκ τῆς ἀρετῆς ἔσχε μετὰ ταῦτα· ὥστε ἐξ ἔργων αὐτοῦ, ὧν προέγνω ὁ Θεὸς, τοιοῦτον αὐτὸν νῦν γεγονέναι πεποίηκε.

Compare with this doctrine that of the preceding heretical teacher which it most resembles.

(b) Καὶ γὰρ καὶ ὁ Υἱός, φησὶν, οὐ μόνον τὸν Πατέρα ἀκριβῶς οὐ γινώσκει· λείπει γὰρ αὐτῷ εἰς τὸ καταλαβεῖν· ἀλλὰ καὶ αὐτὸς ὁ Υἱὸς τὴν ἑαυτοῦ οὐσίαν οὐκ οἶδε· καὶ ὅτι μεμερισμέναι τῇ φύσει, καὶ ἀπεξενωμέναι καὶ ἀπεσχοινισμέναι, καὶ ἀλλότριοι, καὶ ἀμέτοχοί εἰσιν ἀλλήλων αἱ οὐσίαι τοῦ Πατρὸς καὶ τοῦ Υἱοῦ καὶ τοῦ ἁγίου Πνεύματος, καὶ, ὡς αὐτὸς ἐφθέγξατο, ἀνόμοιοι πάμπαν ἀλλήλων ταῖς τε οὐσίαις καὶ δόξαις εἰσὶν ἐπ' ἄπειρον. Τὸν γοῦν Λόγον φησὶν εἰς ὁμοιότητα δόξης καὶ οὐσίας ἀλλότριον εἶναι παντελῶς ἑκατέρων τοῦ τε Πατρὸς καὶ τοῦ ἁγίου Πνεύματος· τούτοις γὰρ ἐφθέγξατο τοῖς ῥήμασιν ὁ ἀσεβής· καὶ διῃρημένον δὲ εἶναι καθ' ἑαυτὸν, καὶ ἀμέτοχον κατὰ πάντα τοῦ Πατρὸς τὸν Υἱὸν ἔφησε. Ταῦτα μέρη τῶν ἐν τῷ γελοίῳ συγγράμματι κειμένων μυθιδίων ἐστὶν Ἀρείου.

Contrast the position of Arius here shewn with that of the bulk of those who hesitated to accept the Nicene formulas.

(c) Περὶ γὰρ τῆς κτίσεως μνημονεύων, ἀκολούθως γράφει καὶ περὶ τῆς ἐν τῇ κτίσει τοῦ δημιουργοῦ δυνάμεως, ἥτις ἐστὶν ὁ Λόγος τοῦ Θεοῦ, δι' οὗ καὶ τὰ πάντα γέγονεν. Εἰ μὲν οὖν αὐτάρκης ἐστὶν ἡ κτίσις ἀφ' ἑαυτῆς μόνης χωρὶς Υἱοῦ γνωρίσαι τὸν Θεὸν, σκοπεῖτε μὴ πέσητε, νομίζοντες καὶ χωρὶς Υἱοῦ τὴν κτίσιν γεγονέναι· εἰ δὲ δι' Υἱοῦ γέγονε, καὶ ἐν αὐτῷ τὰ πάντα συνέστηκεν, ἐξ ἀνάγκης ὁ τὴν κτίσιν ὀρθῶς θεωρῶν θεωρεῖ καὶ τὸν ταύτην δημιουργήσαντα Λόγον, καὶ δι' αὐτοῦ τὸν Πατέρα νοεῖν ἄρχεται· εἰ δὲ καὶ κατὰ τὸν Σωτῆρα, Οὐδεὶς γινώσκει τὸν Πατέρα εἰ μὴ ὁ Υἱὸς, καὶ ᾧ ἂν ὁ Υἱὸς ἀποκαλύψῃ· τῷ τε Φιλίππῳ λέγοντι, Δεῖξον ἡμῖν τὸν Πατέρα, οὐκ ἔλεγε, βλέπε τὴν κτίσιν, ἀλλ' Ὁ ἐμὲ ἑωρακὼς ἑώρακε τὸν Πατέρα· εἰκότως ὁ Παῦλος, αἰτιώμενος τοὺς Ἕλληνας, ὅτι, τὴν ἁρμονίαν καὶ τὴν τάξιν τῆς κτίσεως θεωροῦντες, οὐ διανοοῦνται περὶ τοῦ ἐν αὐτῇ δημιουργοῦ Λόγου· (τὰ γὰρ κτίσματα μηνύει τὸν ἑαυτῶν δημιουργόν·) ἵνα δι' αὐτῶν καὶ τὸν ἀληθινὸν Θεὸν νοήσωσι, καὶ παύσωνται τῆς εἰς τὰ κτίσματα λατρείας, εἴρηκεν, ἥ τε ἀΐδιος αὐτοῦ δύναμις καὶ θειότης, ἵνα τὸν Υἱὸν σημάνῃ.

State concisely the gist of this argument.

(d) Ἢ διὰ τί, ἐὰν μὲν ἀκούωσιν, ὅτι Υἱὸν ἔχει ὁ Θεὸς, εἰς ἑαυτοὺς ἀποβλέποντες ἀρνοῦνται τοῦτον· ἐὰν δὲ ἀκούωσιν, ὅτι κτίζει καὶ ποιεῖ, οὐκέτι τὰ ἀνθρώπινα ἀντιτιθέασιν; ἔδει δὲ καὶ ἐν τῷ κτίζειν ἀνθρώπινα νοεῖν αὐτοὺς καὶ ὕλην ὑποβάλλειν τῷ Θεῷ, ἵνα καὶ τὸ εἶναι κτίστην τὸν Θεὸν ἀρνήσωνται, καὶ λοιπὸν μετὰ Μανιχαίων κυλίωνται.

(e) Οὐ γὰρ θέμις εἰπεῖν ἐκ τῆς οὐσίας τῆς ἀτρέπτου τρεπτὸν γεννᾶσθαι Λόγον καὶ ἀλλοιουμένην σοφίαν. Πῶς γὰρ ἔτι Λόγος, εἰ τρεπτός ἐστιν; ἢ πῶς ἔτι σοφία τὸ ἀλλοιούμενον; εἰ μὴ ἄρα ὡς ἐν οὐσίᾳ συμβεβηκὸς, οὕτως εἶναι θέλουσιν, ὡς ἐν ἰδιαζούσῃ τινὶ οὐσίᾳ συμβεβηκέναι τινὰ χάριν καὶ ἕξιν ἀρετῆς, καὶ κεκλῆσθαι ταύτην οὕτως Λόγον, καὶ Υἱὸν καὶ Σοφίαν, ὥστε καὶ ἀφαιρεῖσθαι καὶ προστίθεσθαι αὐτῇ δύνασθαι. Τοιαῦτα γὰρ φρονοῦντες πολλάκις εἰρήκασιν. Ἀλλ' οὐκ ἔστι Χριστιανῶν ἡ πίστις αὕτη.

2. Examine fully the applicability of the following illustration:—

λησταί τινες ἀποσυλῶσι τὸν Λόγον ἀπὸ τοῦ θεοῦ, καὶ ἄντικρυς κατ' αὐτοῦ φθέγγονται, ὅτι ἦν ποτε τοῦ ἰδίου Λόγου καὶ Σοφίας χωρὶς, καὶ τὸ φῶς ἦν ποτε χωρὶς αὐγῆς, καὶ ἄγονος ἦν ἡ πηγὴ καὶ ξηρά.

3. How does Athanasius prove the assertion contained in the following sentence?

Εἰ δὲ, ὡς Ἀστερίῳ ἤρεσε τὸ μὴ ποίημα ἀλλ' ἀεὶ ὂν ἀγένητον εἶναι, οὕτως ἐρωτῶσιν, ἀκουέτωσαν οὐχ ἅπαξ ἀλλὰ πολλάκις ὅτι καὶ ὁ Υἱὸς οὕτω κατὰ ταύτην τὴν ἐκδοχὴν ἀγένητος ἂν λεχθείη.

What do you know of Asterius?

4. How does Athanasius comment on the words καθήμενος ἐν δεξιᾷ τοῦ Πατρός as applied to Christ?

5. Collect the passages of Scripture used by Athanasius in this treatise with reference to the eternal and unchangeable nature of the Son of God.

THURSDAY, *January* 10, 1884. 1—4.

A.

TH. C. CYPRIANI EPISTOLAE, XLIV—END.

1. TRANSLATE:

(*a*) Novato illinc a vobis recedente id est procella et turbine recedente, ex parte illic quies facta est et gloriosi ac boni confessores, qui de ecclesiâ illo incitante discesserant, posteaquam ab Urbe ille discessit, ad ecclesiam reverterunt.

What were the lines of conduct adopted by Novatus at Rome and Carthage respectively? Can you reconcile them?

(*b*) Tum deinde post episcopatum non exambitum nec extortum, sed de Dei, qui sacerdotes facit, voluntate susceptum quanta in ipso suscepto episcopatu suo virtus, quantum robur animi, qualis firmitas fidei,—quod nos simplici corde et perspicere penitus et laudare debemus,—sedisse intrepidum Romae in sacerdotali cathedra eo tempore, cum tyrannus infestus sacerdotibus Dei fanda atque infanda comminaretur, cum multo patientius et tolerabilius audiret, levari adversus se aemulum principem, quam constitui Romae Dei sacerdotem! Nonne hic, frater carissime, summo virtutis et fidei testimonio praedicandus est, nonne inter gloriosos confessores et martyres deputandus, qui tantum temporis sedit exspectans corporis sui carnifices et tyranni ferocientis ultores, qui Cornelium adversus edicta feralia resistentem et minas et cruciatus et tormenta fidei vigore calcantem vel gladio invaderent vel crucifigerent vel igne torrerent vel quolibet inaudito genere poenarum viscera eius et membra laniarent? Etiamsi maiestas Domini protegentis et bonitas sacerdotem, quem fieri voluit, factum quoque protexit, tamen Cornelius, quantum ad eius devotionem pertinet et timorem, passus est, quidquid pati potuit, et tyrannum armis et bello postmodum victum prior sacerdotio suo vicit.

Explain the allusions.

(*c*) Quare et de Cornelio et de nobis quaecunque iactantur, nec audias facile nec credas, frater carissime. Si qui enim infirmitatibus occupantur, illis, sicut placuit, in periculo subvenitur. Postea tamen quam subventum est et periclitantibus pax data est, offocari a nobis non possunt aut opprimi aut vi et manu nostra in exitum mortis urgeri, ut quoniam morientibus pax datur, necesse sit mori eos, qui acceperint pacem, cum magis in hoc indicium divinae pietatis et paternae lenitatis appareat, quod qui pignus vitae in data pace percipiunt, hic quoque ad vitam percepta pace teneantur. Et idcirco, si accepta pace commeatus a Deo datur, nemo hoc debet in sacerdotibus criminari, cum semel placuerit, fratribus in periculo subveniri.

When and how were the rules passed, some of the cavils against which are here dealt with?

2. State the facts with respect to the change of policy alluded to in the following passage and its cause.

Merito enim trahebatur dolentium poenitentia tempore longiore, ut infirmis in exitu subveniretur, quamdiu quies et tranquillitas aderat, quae differre diu plangentium lacrimas et subvenire sero morientibus in infirmitate pateretur. At vero nunc non infirmis, sed fortibus pax necessaria est, nec morientibus, sed viventibus communicatio a nobis danda est.

3. Who were *Felicissimus, Fortunatus, Maximus,* mentioned in these letters? Distinguish if more than one person bears either of these names.

4. Translate:

(*a*) Manifestum est autem, ubi et per quos remissa peccatorum dari possit, quae in baptismo scilicet datur. Nam Petro primum Dominus, super quem aedificavit ecclesiam et unde unitatis originem instituit et ostendit, potestatem istam dedit, ut id solveretur in coelis, quod ille solvisset in terris. Et post resurrectionem quoque ad apostolos loquitur dicens: Sicut misit me pater, et ego mitto vos. Hoc cum dixisset, inspiravit et ait illis: Accipite Spiritum sanctum. Si cuius remiseritis peccata, remittentur illi; si cuius tenueritis, tenebuntur. Unde intelligimus, non nisi in ecclesia praepositis et in evangelica lege ac dominica ordinatione fundatis licere baptizare et remissam peccatorum dare, foris autem nec ligari aliquid posse nec solvi, ubi non sit, qui aut ligare possit aliquid aut solvere.

(*b*) Illud etiam quale est, quod vult Stephanus his, qui apud haereticos baptizantur, adesse praesentiam et sanctimoniam Christi? Nam si non mentitur apostolus dicens: Quotquot in Christo tincti estis, Christum induistis, utique qui illic in Christo baptizatus est, induit Christum. Si autem induit Christum, accipere potuit et Spiritum sanctum, qui a Christo missus est, et frustra illi venienti ad accipiendum Spiritum manus imponitur; nisi si a Christo spiritum induit, ut apud haereticos sit quidem Christus, non sit autem illic Spiritus sanctus.

How were the arguments in the last two passages answered, when the Church decided against Cyprian's view? Give also any reply which may occur to yourself.

5. What do we learn from these letters as to the practice of different portions of the Church in regard to the rebaptism of heretics?

6. What do we learn from these Epistles as to the usage of the North African Church with respect to (*a*) the common age for baptizing, (*b*) rites practised at baptism, (*c*) the frequency with which the Eucharist was celebrated, (*d*) the method of appointment of bishops?

B.

AUGUSTINUS: DE DOCTRINA CHRISTIANA.

1. SKETCH Augustine's conception of the qualifications to be possessed by an interpreter of Holy Scripture. Give examples of his allegorical method of treating the Old Testament, and compare it with that of Origen.

How does he apply the rule "quae quasi flagitiosa inperitis uidentur siue tantum dicta siue etiam facta sunt, uel ex Dei persona, uel ex hominum quorum nobis sanctitas commendatur, tota figurata sunt"?

2. State the nature and purpose of the 'temperatum genus dicendi.' What examples of its use are quoted? In what cases does Augustine hold that it may be lawfully employed by the Christian teacher?

3. What contemporary heresies are referred to in this work, and in what manner?

4. Comment on the expressions between the asterisks in the following passages (which are not to be translated).

(*a*) quem ad modum medici cum adligant uolnera non inconposite sed apte id faciunt, ut uinculi utilitatem quaedam pulcritudo etiam consequatur: sic medicina Sapientiae *per hominis susceptionem* nostris est accommodata uolneribus; *de quibusdam contrariis curans, et de quibusdam similibus.*

(*b*) totus autem canon Scripturarum *in quo istam considerationem uersandam dicimus* his libris continetur.

What opinions did Augustine hold with regard to the authorship of (i) the Books Wisdom and Ecclesiasticus, (ii) the Epistle to the Hebrews?

(*c*) ille numerus aedificationis templi, qui commemoratur in euangelio, quadraginta scilicet et sex annorum, nescio quid musicum sonat, et *relatus ad fabricam dominici corporis, propter quam templi mentio facta est, cogit nonnullos haereticos confiteri Filium Dei non falso sed uero et humano corpore indutum.*

(*d*) quintam Tichonius regulam ponit quam De temporibus adpellat; qua regula plerumque inueniri uel conici possit latens in scripturis sanctis quantitas temporum. duobus autem modis uigere dicit hanc regulam; aut *tropo synecdoche,* aut *legitimis numeris.*

5. Distinguish between

antiphrasis, ironia; barbarismus, soloecismus; caesum, membrum; facinus, flagitium; interrogatio, percontatio.

6. Denique cum apud Caesaream Mauritaniae populo dissuaderem pugnam ciuilem, uel potius quam ciuilem, quam Cateruam uocabant...egi quidem granditer.

What event is here referred to?

7. Translate

(*a*) iam uero sicut animi quaedam mors est uitae prioris morumque relictio quae fit paenitendo; sic etiam corporis mors est animationis pristinae resolutio: et quo modo animus, post paenitentiam qua priores mores perditos interemit, reformatur in melius; sic etiam corpus, post istam mortem quam uinculo peccati omnes debemus, credendum et sperandum est resurrectionis tempore in melius commutari, ut non caro et sanguis regnum Dei possideant, quod fieri non potest; sed corruptibile hoc induat incorruptionem et mortale hoc induat inmortalitatem, nullamque faciens molestiam, quia nullam patietur indigentiam, a beata perfectaque anima cum summa quiete uegetetur.

(*b*) ubi autem talis sensus eruitur, cuius incertum certis sanctarum scripturarum testimoniis non possit aperiri, restat ut ratione reddita manifestus adpareat, etiam si ille cuius uerba intelligere quaerimus eum forte non sensit. sed haec consuetudo periculosa est: per Scripturas enim diuinas multo tutius ambulatur; quas uerbis translatis opacatas cum scrutari uolumus, aut hoc inde exeat quod non habeat controuersiam; aut, si habet, ex eadem Scriptura ubicumque inuentis atque adhibitis testibus terminetur.

(*c*) sicut enim corporis medicamenta, quae hominibus ab hominibus adhibentur nonnisi eis prosunt quibus Deus operatur salutem, qui et sine illis mederi potest, cum sine ipso illa non possint, et tamen adhibentur; et si hoc officiose fiat, inter opera misericordiae uel beneficentiae deputatur; ita et adiumenta doctrinae tunc prosunt animae adhibita per hominem, cum Deus operatur ut prosint, qui potuit euangelium dare homini etiam non ab hominibus neque per hominem.

FRIDAY, *January* 11, 1884. 9—12.

A.

THE LIFE AND TIMES OF HINCMAR.

1. DESCRIBE the original materials which we possess for the study of this period of history.

2. Discuss the causes of the weakness and disorder of the Franco-Gallic kingdom in the ninth century.

3. Give the terms of the treaty of Verdun and its date.

4. Describe fully the circumstances under which Hincmar was appointed to the See of Rheims.

5. Give some account of the Pope who during this century most advanced the power of the Papacy.

Compare the general character of the claims put forward on behalf of the Papacy in Mediæval times (from the age of Charles the Great) and in Modern times.

6. Give the history of the affair of Rothad, pointing out its significance.

7. Describe the probable origin of the False Decretals and the early history of their reception.

8. Mention and illustrate any movements shewing genuine life and activity within the Western Church during this period.

9. Name the chief theological controversies of the West during the ninth century, giving a short account of the men who took the most prominent part in them.

10. Describe the character, principles and influence of Hincmar as a statesman.

B.

ERASMUS.

1. Quis nescit quam diu Parisiis ille, quantoque in pretio fuit? Tum Bononiae praeterea, ut nihil interim de Roma dicam, quam ego tamen vel principem Academiarum esse omnium duco. Jam Oxonia Cantabrigiaque tam clarum habent Erasmum quam habere debent eum qui in utraque diu, cum ingenti scholasticorum fruge, nec minore sua laude versatus est. Utraque eum ad se invitat.

MORUS DORPIO.

Illustrate the allusions in this passage from the life of Erasmus and state how he was connected with the writer and receiver of this letter.

2. In a satirical list of the supporters of Reuchlin Erasmus is described as 'homo pro se'. Discuss this estimate of his character and contrast his work and influence with those of any other of the Reformers.

3. Give an account of *one* of the following Colloquies of Erasmus:

(1) Apotheosis Capnionis.
(2) Peregrinatio Religionis ergo.
(3) Exequiae Seraphicae.

and explain such of the following words or phrases as occur in the Colloquy you select:

ordo seraphicus—male mori—Hebraice precatus est pacem—collecta—pseudoapostoli qui conjurati substruunt impiam turrim Babel—Antonius habet sacrum ignem—Thomas Acrensis—stationes Romanae—syngrapha divo Aegidio missa.

4. What aids for the study of the New Testament did Erasmus supply in addition to the Greek Text? Give some account of the *Paraclesis, Methodus* and *Apologia* prefixed to his first edition of the 'Novum Instrumentum', specifying particularly what he says of his own materials for this edition, and of any previous labourer on the same subject.

5. Ex interpretibus divinae scripturae eos potissimum delige qui a litera quam maxime recedunt. (*Erasmi Enchiridion.*)

Explain and account for the above advice. What were the methods of Scriptural interpretation most in favour in the time of Erasmus? Give examples from the *Enchiridion* of such exposition as he specially commends. What was the purpose of this book?

6. Translate the following passage from the *Moriae Encomium*, explaining the allusions and giving some account of the whole work:

Hic videas etiam decrepitos senes juvenilis animi robur praestare nec offendi sumptibus nec fatigari laboribus nec deterreri quidquam si leges si religionem si pacem si res humanas omnes sursum ac deorsum misceant..... Equidem incerta sum adhuc utrum his rebus exemplum dederint an potius hinc sumpserint episcopi quidam Germanorum, qui simplicius etiam omisso cultu omissis benedictionibus aliisque id genus caeremoniis plane satrapas agunt, adeo ut propemodum ignavum parumque decorum episcopo putent alibi quam in acie fortem animam Deo reddere. Jam vero vulgus sacerdotum nefas esse ducens a praesulum suorum sanctimonia degenerare, euge quam militariter pro jure decimarum belligerantur, quam hic oculati, si quid ex veterum literis elicere quo plebeculam territent, et plusquam decimas deberi convincant.

FRIDAY, *January* 11, 1884. 1—4.

MODERN THEOLOGICAL WRITERS.

A.

BUTLER'S ANALOGY. PART I.

I. EXPLAIN the different senses of the term *analogy*, and point out the sense in which it is used by Butler. Write down in your own words in a single sentence the primary thesis of his book, so as to exhibit clearly his mode of appeal to analogy; and indicate the presumptions on which his appeal rests.

II. Discuss the question whether, and if so how far, the validity of Butler's arguments respecting a future life is liable to be affected by discoveries (1) in physiology, or (2) as to the ultimate constitution of matter.

III. Explain the meaning and origin of the term *final cause*, and the sense in which Butler treats pleasures and pains as final causes. In what respects, if any, do you consider his treatment of the Divine government by rewards and punishments as unsatisfactory or defective, as regarded independently of revelation? How far can any such defects be accounted for by the special purpose of his book?

IV. "It is particularly to be observed that the Divine government which we "experience ourselves under in the present state, taken alone, is allowed not to be "the perfection of moral government. And yet this by no means hinders but that "there may be somewhat, be it more or less, truly moral in it. A righteous govern-"ment may plainly appear to be carried on to some degree; enough to give us "the apprehension that it shall be completed or carried on to that degree of per-"fection which religion teaches us it shall; but which cannot appear till much more "of the Divine administration can be seen than can in the present life."

Expand and paraphrase this passage in your own words, indicating and commenting on the intentional limitations of statement contained in it. Compare its purport with any other theistic theory of the world, ancient or modern, for which Butler may have wished to disclaim responsibility.

V. What are the different elements and characteristics of probation, as conceived by Butler? What analogies does he adduce in respect of probation? It has been said that the idea of education should be substituted for that of probation: to what extent would Butler's argument be affected by the substitution?

VI. Explain Butler's theory of habits, and its relation to his view of a future life. To what extent is it original?

VII. Describe Butler's argument for the compatibility of 'necessity' with design in the constitution of nature. Discuss the allegation that he has fallen into a confusion between two contradictory theories, fatalism and the doctrine of universal necessity.

VIII. Explain precisely the nature and limitations of Butler's appeal to human ignorance. How does he meet the objection that "the answers...given to what is "objected against Religion may equally be made use of to invalidate the proof of "it, since their stress lies so very much upon our ignorance"?

B.

HOOKER'S ECCLESIASTICAL POLITY, BOOK V.

1. GIVE a general sketch of the character and progress of the Puritan movement in England during Elizabeth's reign. Write an account of the following writings: (*a*) the *Admonitions of Parliament*, (*b*) the *Christian Letter*.

2. Trace the main course of Hooker's argument up to the beginning of the Fifth Book.

3. Explain carefully the following passages:

(*a*) "Whatsoever is natural to Deity, the same remaineth in Christ uncommunicated unto his manhood."

(*b*) "We hold it in regard of the fore-alleged proofs a most infallible truth that Christ as man is not everywhere present. There are which think it as infallibly true that Christ is everywhere present as man, which peradventure in some sense may well enough be granted."

4. What is Hooker's opinion as to the validity of Baptism by lay hands, and on what considerations is it based?

Examine his defence of the administration of interrogatories to infants at Baptism.

5. Define precisely the terms Transubstantiation, Consubstantiation; and describe the position of the "Sacramentaries" in the Eucharistic controversy.

6. On what grounds does Hooker urge the observance of Sunday? How does he meet the objection to other Festivals that "because God hath left it to all men at liberty that if they think good to bestow six whole days in labour they may, neither is it more lawful for the Church to abridge any men of that liberty which God hath granted, than to take away the yoke which God hath laid upon them and to countermand what he doth expressly enjoin"?

7. How does he justify the use of the words "Receive the Holy Ghost," &c. in the Ordering of Priests?

SATURDAY, *January* 12, 1884. 10—12.

HEBREW PRIZE.

1. GIVE rules for the use and position of Methegh.

Add examples.

2. Write down the pause forms of

עַתָּה, קָשֶׁר, שָׁכְנָה, אַחַי, אָנֹכִי, אִתְּךָ, הִתַּז, וַיֵּלֶךְ, חֲצִי, יִפְקְדוּ, יִשְׁמָרְךָ,

מָלָךְ, לַיְלָה, מְאוּמָה.

Which of the above words are accented on the penultimate?

3. Write down the suffixed and construct forms of סֵפֶר and צְדָקָה, in singular and plural; explaining the vowel changes which take place under the first two radicals.

4. Write the following singulars with suffixes of the 3 sing. masc. and 2 plur. masc.

גְּנֵבָה, אֹיֵב, פֶּה, גָּמָל, נַעַר, פְּרִי, עוֹלָם, פַּת, בְּהֵמָה, חָרָשׁ.

5. Write out the Niph'al of קוּם, and the Hiph'īl of חלל; indicating wherever the tone falls on the penultimate syllable.

6. Give the suffixed forms of פְּקֻדָּה, כְּמוֹ, פֹּעַל (sing. and plur.) and אָח (sing. and plur.); indicating wherever the tone falls on the penultimate syllable.

7. Examine the use of the Infinitive absolute in Hebrew, and give examples.

8. Classify and give instances of Hebrew nouns which are feminine by signification but not in form.

9. Translate the following sentences, and explain and illustrate the construction of each.

(*a*) יָשׁוּב חַרְבּוֹ יִלְטוֹשׁ :

(*b*) יַחֲלֹק אֶת־הָאָרֶץ :

(*c*) אֲמָרִים אֱמֶת :

(*d*) בְּאַחַד מִמֶּנּוּ :

(*e*) קוֹלִי אֶקְרָא :

(*f*) וּכְעֵת מוּתָהּ וַתְּדַבֵּרְנָה :

(*g*) וָאֵרָא . . . בְּאֵל שַׁדָּי :

10. Translate into pointed biblical HEBREW:

Then said Mercy, Sir, I see nothing; but Christiana held her peace.

But said the Interpreter, Look again; she therefore look'd again and said, Here is not anything but an ugly Spider, who hangs by her hands upon the wall. Then said he, Is there but one Spider in all this spacious Room? Then the water stood in Christiana's eyes, for she was a woman quick of apprehension; and she said, Yes, Lord, there is here more than one. Yea, and Spiders whose Venom is far more destructive than that which is in her. The Interpreter then looked pleasantly upon her, and said, Thou hast said the truth. This made Mercy blush, and the Boys to cover their faces, for they all began now to understand the Riddle.

Then said the Interpreter again, The Spider taketh hold with her hands as you see, and is in King's Palaces. And wherefore is this recorded, but to shew you, that how full of the Venom of sin soever you be, yet you may by the hand of faith lay hold of and dwell in the best Room that belongs to the King's House above?

The Pilgrim's Progress.

MATHEMATICAL TRIPOS.

PART III.

MONDAY, *January* 7, 1884. 9 to 12.

[*Each candidate is not to send up answers to more than five questions.*]

1 B. DEFINE a Bessel's Function of any order, and prove that $x\dfrac{dJ_n}{dx} = xJ_{n-1} - nJ_n$.

Explain, without proving, the method of expanding a function $\phi(x)$, when possible, in a series of the form $\Sigma A_n J_0(nx)$, the summation extending to all values of n given by $J_0(nb) = 0$.

Apply this to shew that if $x^4 - b^4 = \Sigma L_n J_0(nx)$,

$$L_n = \frac{2}{b^2\{J_1(nb)\}^2}\int_0^b (x^4 - b^4)\, xJ_0(nx)\, dx = \frac{8b}{n^3}\,\frac{2J_2(nb) - nbJ_3(nb)}{\{J_1(nb)\}^2} = \frac{32}{b}\,\frac{4 - n^2b^2}{n^5 J_1(nb)}.$$

2 B. Shew that an ellipsoid with three unequal axes is a possible form of equilibrium for a mass of homogeneous liquid which is rotating as a rigid body about a fixed axis.

Shew that gravity at any point in the liquid will vary as the length of the normal to the surface of equal pressure intercepted by the equatoreal plane.

3 B. A system is in a configuration of equilibrium in a conservative field of force; shew that the equilibrium will be thoroughly stable if in that configuration the potential energy be a minimum.

Shew that the existence of equal roots in the equation determining the periods of the principal vibrations does not of necessity imply instability, and in that case point out what is implied.

A rod of mass M and length $2a$ is capable of turning about one end; to its other end n equal weightless strings each of length b and carrying a mass N/n are attached, and the whole is capable of motion in one vertical plane under gravity. Shew that in the system of possible co-existent vibrations there are $(n-1)$ periods each equal to $\pi\sqrt{b/g}$ and the remaining two are π/p_1 and π/p_2, where $\pm p_1$, $\pm p_2$ are the roots of the equation

$$\{(\tfrac{1}{3}M + N)\,p^2 - \tfrac{1}{2}g\,(M + 2N)/a\}\,(p^2 - g/b) = Np^4.$$

Shew further that if the vibrations be not confined to one plane then of the possible modes of vibration there are $2(n+1)$ periods, and of these $2(n-1)$ have the value $\pi\sqrt{b/g}$, and find the others.

4 B. Find, by Newtonian methods, an approximate value of the apsidal angle in a nearly circular orbit described under a central force.

Shew that, if the force vary inversely as the nth power of the distance, n being greater than unity and less than three, the ratio of the apsidal angles in a nearly circular and a very flat orbit will be as $\sqrt{3-n} : 1$.

5 B. Shew that if a, b, c, f, g, h be the constants introduced in the solution of the equations

$$\ddot{x} = \frac{\partial V}{\partial x}, \quad \ddot{y} = \frac{\partial V}{\partial y}, \quad \ddot{z} = \frac{\partial V}{\partial z},$$

then the principle of the variation of parameters as applied by Lagrange to the equations

$$\ddot{x} = \frac{\partial V}{\partial x} + \frac{\partial \Omega}{\partial x}, \quad \ddot{y} = \frac{\partial V}{\partial y} + \frac{\partial \Omega}{\partial y}, \quad \ddot{z} = \frac{\partial V}{\partial z} + \frac{\partial \Omega}{\partial z},$$

will lead to equations of the form

$$\frac{\partial \Omega}{\partial a} = [a, b]\,\dot{b} + [a, c]\,\dot{c} + [a, f]\,\dot{f} + [a, g]\,\dot{g} + [a, h]\,\dot{h}.$$

Shew further that adopting Poisson's method the corresponding equations are

$$\dot{a} = (a, b)\frac{\partial \Omega}{\partial b} + (a, c)\frac{\partial \Omega}{\partial c} + (a, f)\frac{\partial \Omega}{\partial f} + (a, g)\frac{\partial \Omega}{\partial g} + (a, h)\frac{\partial \Omega}{\partial h},$$

and explain the difference between $[a, b]$ and (a, b).

Shew that $[a, b]$ and (a, b) are both independent of t explicitly.

6 C. Discuss the condition of steady motion in the case of fluid moving rotationally, and shew that in the case of plane motion, or motion symmetrical about an axis, the vorticity (i.e. the ratio of the circulation of any filament to its volume) must be constant along a stream line.

Hence find the differential equation of the stream function for the latter case; and integrate it for the case where the vorticity is uniform throughout.

Apply your solution to the following problem. A closed vessel bounded by two coaxal circular cylinders, of radii a, b, and length $2h$, with plane ends perpendicular to the axis, is filled with fluid in rotational motion, the vorticity being uniform, and the planes of the vortex filaments perpendicular to the axis. Shew that when the motion is steady, the stream function is of the form

$$\psi = \mu(r^2 - a^2)(r^2 - b^2) - \mu r \Sigma L_n \frac{\cos nz}{\cos nh}\left\{\frac{J_1(nri)}{J_1(nai)} - \frac{Y_1(nri)}{Y_1(nai)}\right\},$$

where J_1, Y_1 denote the two kinds of Bessel's Functions of the first order and the summation extends to all values given by the equation

$$J_1(nai)\,Y_1(nbi) = J_1(nbi)\,Y_1(nai).$$

7 C. Give a summary of Green's method of treating vibrations in an elastic medium.

A homogeneous membrane rests strained on a smooth fixed sphere. Shew that the potential energy producing small vibrations in a unit area is

$$\tfrac{1}{2}A\left[\frac{\partial u}{\partial \theta} + u\cot\theta + \operatorname{cosec}\theta\frac{\partial v}{\partial \phi}\right]^2 + \tfrac{1}{2}B\left[\left(\frac{\partial v}{\partial \theta} - v\cot\theta + \operatorname{cosec}\theta\frac{\partial u}{\partial \phi}\right)^2 - 4\frac{\partial u}{\partial \theta}\left(u\cot\theta + \operatorname{cosec}\theta\frac{\partial v}{\partial \phi}\right)\right],$$

where u and v are the displacements along the meridians and parallels. Deduce the equations of vibration.

8 C. Calculate for a given angle of incidence the intensity of the monochromatic light which is reflected at the interval between two parallel plates of glass.

Find the intensity when the glasses are not of the same kind.

Shew how to determine the angle between the plates when they are not exactly parallel from observation of the number of the bright and dark bands of light produced in a given interval, the wave-length being known.

9 C. Determine the transverse vibrations of a stretched string, and point out how the notes sounded are to be determined from the given conditions at the ends of the string.

Three strings OA, OB, OC of the same material, but different lengths, are united at O, and are kept tight by being fastened to fixed points A, B, C, the angles BOC, COA, AOB being denoted by α, β, γ. Shew that the times of vibration of the different notes sounded when O is free are determined by the equation for T

$$\sqrt{(\sin\alpha)}\cot\pi T_1/T+\sqrt{(\sin\beta)}\cot\pi T_2/T+\sqrt{(\sin\gamma)}\cot\pi T_3/T=0,$$

where T_1, T_2, T_3, are the times of the gravest notes of OA, OB, OC when O is fixed.

10 C. Prove that if the stress in an isotropic solid be a tension P, the principal strains will consist of an extension $P(1/3n+1/9k)$ and compressions $P(1/6n-1/9k)$; and that if the strain be a longitudinal extension e, the principal stresses will consist of a tension $(k+\frac{4}{3}n)e$ and tensions $(k-\frac{2}{3}n)e$; k being the elasticity of volume, and n the rigidity of the substance.

When a straight rectangular beam is bent into a circle and the ends joined, describe the consequent distortion in shape of the cross section.

11 D. A function $f(x)$ is given between the values 0 and l of the variable. Investigate a series of the form $\Sigma A_n\cos n\pi x/l$ which shall represent it between these values.

It is given that a function $f(x)$ is such that it can be represented by the series $\Sigma A_{2n+1}\cos(2n+1)\pi x/l$, and its values are given for all values of the variable between 0 and $\frac{1}{2}l$. Shew how to determine the coefficients A_{2n+1}.

Apply your method to the example in 12 D to shew that if, when $t=0$, θ is zero everywhere, then

$$A_{2n+1}=\left\{\frac{4}{(2n+1)\pi}\right\}^2 a\cos\frac{(2n+1)\pi}{4}.$$

12 D. State the principles on which the motion of heat in a solid is determined, and deduce the general equation of motion of heat.

Two uniform plates of the same substance and thickness (a) are in contact, and one slips over the other with constant velocity v, the friction per unit of area being F. The outside surface of one is impervious to heat while that of the other is kept at zero temperature. Shew that at any time t their temperatures at a distance x from the impervious surface are given by

$$\theta=\frac{Fv}{JC}\left\{a+\Sigma A_{2n+1}e^{-\frac{(2n+1)^2\pi^2C^2t}{16a^2c^2}}\cos(2n+1)\frac{\pi x}{4a}\right\},$$

$$\theta=\frac{Fv}{JC}\left\{2a-x+\Sigma A_{2n+1}e^{-\frac{(2n+1)^2\pi^2C^2t}{16a^2c^2}}\cos(2n+1)\frac{\pi x}{4a}\right\};$$

where C is the conductivity, c the specific heat per unit volume, and J the mechanical equivalent of heat.

13 D. Define specific inductive capacity, and establish the equation

$$\frac{\partial}{\partial x}\left(K\frac{\partial V}{\partial x}\right)+\frac{\partial}{\partial y}\left(K\frac{\partial V}{\partial y}\right)+\frac{\partial}{\partial z}\left(K\frac{\partial V}{\partial z}\right)=0.$$

Shew that, if ξ, η be the distances from two fixed points distant c apart, and if the phenomena be symmetrical about the line joining these points, then

$$K\left(\frac{\partial^2 V}{\partial \xi^2}+\frac{\partial^2 V}{\partial \eta^2}+\frac{2}{\xi}\frac{\partial V}{\partial \xi}+\frac{2}{\eta}\frac{\partial V}{\partial \eta}\right)+\frac{\xi^2+\eta^2-c^2}{2\xi\eta}\left(2K\frac{\partial^2 V}{\partial \xi\partial \eta}+\frac{\partial K}{\partial \xi}\frac{\partial V}{\partial \eta}+\frac{\partial K}{\partial \eta}\frac{\partial V}{\partial \xi}\right)+\frac{\partial V}{\partial \xi}\frac{\partial K}{\partial \xi}+\frac{\partial V}{\partial \eta}\frac{\partial K}{\partial \eta}=0.$$

Apply the above to shew that if the shell bounded by the two spheres of the series $\xi/\eta=\text{const.}$ whose diameters are a_0 and a_1 $(a_1<a_0)$ be occupied by a dielectric in which $K=lc/\xi\eta$ where l is a constant, then the capacity of the condenser so formed is

$$\frac{l}{\log\left(\frac{c+\sqrt{c^2+a_1^2}}{a_1}\right)-\log\left(\frac{c+\sqrt{c^2+a_0^2}}{a_0}\right)}.$$

Shew that this is the same as the capacity of a length $2l$ of a pair of infinite cylinders whose normal sections coincide with the axial section of the given condenser, the dielectric here being air.

14 D. Prove that, if X, Y, Z be the components of the magnetic force of one body at a point (x, y, z), and X', Y', Z' those of another body at that point; then the mutual potential energy of the two bodies will be W where

$$W=\frac{1}{4\pi}\int_{-\infty}^{\infty}\int_{-\infty}^{\infty}\int_{-\infty}^{\infty}(XX'+YY'+ZZ')\,dx\,dy\,dz.$$

If a magnetic needle have its centre fixed and be in the presence of any magnetic system, then when its direction cosines are l, m, n, the component couples L, M, N on the needle satisfy the equation

$$\frac{\partial L}{\partial l}+\frac{\partial M}{\partial m}+\frac{\partial N}{\partial n}=0.$$

Shew that, on the assumption that the induced magnetism of an iron ship produces the quadrantal deviation $hHM\sin 2l$ on a compass needle whose magnetic moment is M, where H is the horizontal intensity of the earth's magnetic force and l the azimuth of the ship's head east of the magnetic north; then this error can be corrected by using two equal compasses placed symmetrically with respect to the fore and aft line with their centres at a distance R where

$$Hh=\tfrac{3}{2}M/R^3.$$

Shew further that, if the two compasses be taken out of the ship and placed with their centres apart at a distance R that makes an angle $\frac{1}{4}\pi+\frac{1}{2}h'$ with the magnetic meridian, so that the deviation each produces in the other is h', then

$$H\tan h'=\tfrac{3}{2}M/R^3.$$

15 D. Describe the mechanical and electric effects of the induction of electrical currents. Define co-efficient of mutual induction, and determine how to calculate it for two given linear conductors.

A conducting wire is bent into the form of an ellipse (axes $2a$, $2b$), and a very small plane lamina of any form and principal moments of inertia A, B, $A+B$, is placed with its centre of gravity at the centre of the ellipse. Shew that if constant currents i, i' circulate round the ellipse and the edge of the lamina respectively, the couple required to hold the lamina with its principal axis (A) inclined at an angle θ to the axis (a) will be of the form $\lambda i i'(A-B)\sin 2\theta$, where λ depends only on a, b.

Shew that on the supposition that the eccentricity of the ellipse is very small, λ is given approximately by $\lambda=15\pi e^2/(8a^2)$. What will be the position of rest?

MONDAY, *January* 7, 1884. $1\frac{1}{2}$ to $4\frac{1}{2}$.

[*Each candidate is not to send up answers to more than five questions.*]

1 A. EXPLAIN how to solve a series of n simultaneous linear differential equations with constant coefficients of the form

$$a_{11}\frac{d^2x}{dt^2}+b_{11}\frac{dx}{dt}+c_{11}x+a_{12}\frac{d^2y}{dt^2}+b_{12}\frac{dy}{dt}+c_{12}y+a_{13}\frac{d^2z}{dt^2}+b_{13}\frac{dz}{dt}+c_{13}z+\ldots=0,$$

$$a_{12}\frac{d^2x}{dt^2}+b_{12}\frac{dx}{dt}+c_{12}x+a_{22}\frac{d^2y}{dt^2}+b_{22}\frac{dy}{dt}+c_{22}y+a_{23}\frac{d^2z}{dt^2}+b_{23}\frac{dz}{dt}+c_{23}z+\ldots=0,$$

.....

so as to express the n dependent variables $x, y, z, \ldots$ in terms of the independent variable t; and discuss in particular the maximum number of arbitrary constants involved.

2 A. Shew that, if a conic section be described through four fixed points on a cubic, the chord joining the remaining intersections of the two curves will pass through a fixed point on the cubic.

The opposite sides bc, de of a given pentagon $abcde$ intersect in A, the sides cd and ea intersect in B, and similarly for the other sides. A cubic is described about $ABCDE$ to touch the circumscribing conic at A and to pass through a. Shew that the cubic will cut bc, cd, and de in co-linear points; and further that two such cubics will intersect in two points co-linear with a.

3 A. Explain how to express the differential coefficients of u_x in terms of the successive differences of u_x, and in particular prove that

$$h^2\frac{d^2u_x}{dx^2}=\Delta^2u_x-\Delta^3u_x+\tfrac{11}{12}\Delta^4u_x-\tfrac{5}{6}\Delta^5u_x+\tfrac{137}{180}\Delta^6u_x-\ldots.$$

and find the general term.

Prove that, if $\qquad \ldots t_{x-2h},\ t_{x-h},\ t_x,\ t_{x+h},\ t_{x+2h},\ldots$

denote the times, measured by a chronograph, at which a shot of weight W moving horizontally passes a series of equidistant screens a distance h apart, then the velocity v at the middle screen will be given by

$$\frac{h}{v}=\Delta t_x-\tfrac{1}{2}\Delta^2t_x+\tfrac{1}{3}\Delta^3t_x-\tfrac{1}{4}\Delta^4t_x+\ldots,$$

and the resistance P of the air in pounds by

$$P=\frac{Wv^2}{gh^2}\left(\Delta^2t_x-\Delta^3t_x+\tfrac{11}{12}\Delta^4t_x-\ldots\right).$$

4 A. Prove that if $\quad \sqrt{\pi}f(p)=\sqrt{2}\int_0^\infty \phi(x)\sin px\,dx,$

then will $\quad \sqrt{\pi}\,\phi(p)=\sqrt{2}\int_0^\infty f(x)\sin px\,dx.$

Shew that, if $Ei(x)=\int_{-\infty}^{x}\frac{e^x}{x}dx$, then

$$\frac{1}{q}\int_0^\infty\{e^{qx}Ei(-qx)-e^{-qx}Ei(qx)\}\sin px\,dx=\frac{1}{p}\int_0^\infty\{e^{qx}Ei(-qx)+e^{-qx}Ei(qx)\}\cos px\,dx=-\frac{\pi}{p^2+q^2}.$$

5 A. A straight line is drawn at random to cut a given closed curve. Shew that the chance that it intersects the line joining any two points taken at random in the area is two-thirds of the chance that it will cut two out of the three lines which join three points taken at random in the area.

Shew that the former chance in the case of a circle is $128/45\pi^2$, and in the case of an equilateral triangle is $\frac{1}{30}(4+3\log 3)$.

6 C. Investigate the conditions to be satisfied in the case of waves in a homogeneous liquid under gravity, and enumerate the most important problems hitherto solved.

Prove that, with cylindrical co-ordinates r, θ, z, a possible state of liquid motion inside a right circular cone of vertical angle 2α is given by the velocity function

$$\phi = Azr^n \cos n\theta \cos 2\pi pt;$$

where $n = \tan^2\alpha$, and that if the axis of the cone be vertical and h the mean depth of the liquid, the frequency, p, of such wave motion, supposed of small displacement, is given by

$$4\pi^2 p^2 h = g.$$

Prove also that the period of the waves is unaffected by any capillarity of the free surface.

7 C. Discuss the general theory of resonators with a small aperture, and shew that their pitch depends only on their volume and the form of the aperture.

If the resonator have several apertures at a distance so great as not to interfere with one another and if n_1, n_2 ... be the frequencies of their notes when each alone acts, shew that the frequency when they all act together is

$$\{n_1^2 + n_2^2 + \ldots\}^{\frac{1}{2}}.$$

Prove that in the case where there is a single small circular aperture of radius a in a thin-walled resonator of volume V, the wave-length of the note emitted is

$$\pi\sqrt{(2V/a)}.$$

8 C. Investigate the planes of polarisation corresponding (1) to a given wave-front, (2) to a given ray, in a biaxal crystal.

In a biaxal crystal the ratios of the axes of the ellipsoid of elasticity are slightly different for different colours, so that the angles between the optic axes for yellow and violet are α, $\alpha+\phi$. The normal to a wave-front of white light in such a crystal makes angles θ_1, θ_2 with the mean optic axes, and the planes through the normal and the optic axes make an angle ω with one another. Shew that the directions of polarisation lie within a small angle

$$\tfrac{1}{2}\phi\left(\frac{\sin\theta_1}{\sin\theta_2} - \frac{\sin\theta_2}{\sin\theta_1}\right)\frac{\sin\omega}{\sin\alpha}.$$

9 C. Find the stress and strain at any point of a homogeneous shell, bounded by two concentric spherical surfaces, due to a uniform external pressure.

Find the amount of this external pressure when the spherical form becomes unstable, and the shell begins to collapse.

10 D. During the transformation of any substance quantities of heat q_1, q_2.... are taken in at absolute temperatures t_1, t_2.... Prove that, if the substance at the end be in the same state as at the beginning, $\Sigma q/t = 0$.

Employ the above theorem to prove that, if L denote the latent heat of vaporisation of the substance and c, c' its specific heats in the first state and the state of saturated vapour, then

$$\frac{dL}{dt} + c - c' = \frac{L}{t}.$$

Explain the physical meaning of c'; and illustrate your explanation by finding its values in the cases of steam and ether vapour at 100° C. having given the following data (at θ° C.):

For water, $L = 606{\cdot}5 - {\cdot}695\theta$, $c = 1 + {\cdot}00004\theta$.

For ether, $L = 94 - {\cdot}07900\theta - {\cdot}000851\theta^2$, $c = {\cdot}529 + {\cdot}00059\theta$.

11 D. A quantity Q of heat is suddenly generated at a point O in an infinite uniform conducting solid, initially at zero temperature. Find an expression for the temperature at any point at any time t afterwards.

Hence prove that at a point at a distance r from O the temperature will increase during a time $r^2/6k$ to the value $Q\,(\frac{2}{3}\pi e r^2)^{-\frac{3}{2}}$ and will then diminish, k denoting the ratio of the conductivity to the specific heat.

Shew that if k be αr^m and the specific heat be βr^{n-3}, the temperature at a distance r at a time t will be

$$\frac{pQ}{4\pi\beta\Gamma(n/p)}\;\frac{e^{-r^p/\alpha p^2 t}}{(\alpha p^2 t)^{n/p}},$$

where $p = n - m - 1$.

12 D. Define electrical resistance, and deduce Kirchhoff's laws for a system of linear conductors.

Two parallel wires AB, CD of the same length na, are connected at equal intervals (a) by $n+1$ cross wires of length $4a$, all being of the same material, so that the resistance of a length a is one ohm. The two opposite points A, D are made electrodes; determine how the currents are distributed in the wires, and find the resistance of the whole system. Shew that there will be no current in the middle wire if n be even.

Shew that, if there be five cross wires and the electrodes be connected with a Daniell's cell (E. M. F. = 1 volt, R. = 9·6 ohms), the total current will be ·07876... Ampères.

13 D. Explain the fundamental distinction between electrostatic and electromagnetic units. If there be v electrostatic units of electricity in one electromagnetic unit, arrange the physical quantities of the theory of electricity in classes so that the index of class shall be the index of the power of v that determines the ratio of the corresponding units.

Shew that v is the velocity with which two unlimited parallel planes, uniformly electrified, must move in the same direction normally to both, that their electrodynamic action may counterbalance their electrostatic repulsion.

TUESDAY, *January* 8, 1884. 9 to 12.

1. IF T_m denote the sum of all the symmetric functions of weight m of the equation of the nth degree

$$x^n + a_1 x^{n-1} + a_2 x^{n-2} + \ldots\ldots + a_n = 0,$$

which contain two and only two roots in each term, e.g. $\Sigma\alpha^p\beta^q$, then

$$T_n + a_1 T_{n-1} + a_2 T_{n-2} + \ldots\ldots + a_{n-2} T_2 - \tfrac{1}{2} n(n-1)\, a_n = 0.$$

Extend this theorem to the case of symmetric functions containing three, four, or any given number of roots.

ii. From any point x, y on the ellipse $b^2x^2 + a^2y^2 = a^2b^2$ three normals are drawn to the curve, shew that the area of the triangle, whose vertices coincide with the feet of these normals, is

$$\frac{ab}{(a^2-b^2)^2}\left[\frac{b^2x^2}{a^2}(b^2-2a^2)^2 + \frac{a^2y^2}{b^2}(a^2-2b^2)^2\right]^{\frac{1}{2}}.$$

3. If Y be the foot of the perpendicular from the centre on the tangent at P on a given ellipse, and a parabola be drawn with focus at Y touching the axes of the ellipse; then if any circle be drawn through P and Y, cutting the ellipse again in P_1, P_2 and P_3, the sides of the triangle $P_1P_2P_3$ will touch the parabola, and the normals at P_1, P_2, P_3 will intersect in a point on the normal at P', where PP' is a diameter of the ellipse.

iv. Prove that the developable circumscribing the quadrics

$$\frac{x^2}{a_1^2} + \frac{y^2}{b_1^2} + \frac{z^2}{c_1^2} = 1 \text{ and } \frac{x^2}{a_2^2} + \frac{y^2}{b_2^2} + \frac{z^2}{c_2^2} = 1$$

is the envelope of the family of quadrics represented by

$$\frac{x^2}{a_1^2\cos^2\theta + a_2^2\sin^2\theta} + \frac{y^2}{b_1^2\cos^2\theta + b_2^2\sin^2\theta} + \frac{z^2}{c_1^2\cos^2\theta + c_2^2\sin^2\theta} = 1.$$

State the corresponding theorem in case the given quadrics be

$$(abcfgh\between xyz)^2 = 1 \text{ and } (a'b'c'f'g'h'\between xyz)^2 = 1.$$

v. Prove that any quadric $u = 0$ is its own polar reciprocal with respect to any surface whose equation is

$$2uu_0 = \left(x_0\frac{\partial u}{\partial x} + y_0\frac{\partial u}{\partial y} + z_0\frac{\partial u}{\partial z} + w_0\frac{\partial u}{\partial w}\right)^2,$$

where u is homogeneous and of the second degree and u_0 the same function of x_0, y_0, z_0, w_0 that u is of x, y, z, w.

6. Prove that the polar equation of the projection of a geodesic on a catenary of revolution on a plane perpendicular to the axis is

$$r\,\mathrm{sn}\,(\theta/k,\ k) = c.$$

7. Prove that, if $K' = K\sqrt{2}$, then $k = \sqrt{2} - 1$, and

$$\operatorname{sn}(1 + i\sqrt{2})u = \frac{(1 + i\sqrt{2})\operatorname{sn} u - (\sqrt{2} - 1)\, i \operatorname{sn}^3 u}{1 - (\sqrt{2} - 1)(\sqrt{2} - i)\operatorname{sn}^2 u}.$$

viii. Shew that the mean value taken over the surface of a sphere of radius r_0 of any continuous function ϕ exceeds the value which that function has at the centre of the sphere by

$$\frac{1}{4\pi}\iiint\left(\frac{1}{r} - \frac{1}{r_0}\right)\left(\frac{\partial^2\phi}{\partial x^2} + \frac{\partial^2\phi}{\partial y^2} + \frac{\partial^2\phi}{\partial z^2}\right)dx\,dy\,dz,$$

taken through the volume of the sphere, where r is the distance of xyz from the centre of the sphere.

Point out any applications of this theorem.

ix. Shew that the surface

$$r = a\left[\frac{1}{2} + \frac{1}{2}\cdot\frac{5P_2}{1.4} - \frac{1.3}{2.4}\cdot\frac{9P_4}{3.6} + \frac{1.3.5}{2.4.6}\cdot\frac{13.P_6}{5.8} - \ldots\ldots\right]$$

consists of two equal spheres which touch one another at the origin.

10. Prove that if in a catenary the line density ρ be given by $\rho = \rho_0 \cosh s/c$, where s is the length of the arc measured from the lowest point, the equation of the catenary can be expressed in the form

$$\tanh y/c = \operatorname{dn} x/c, \text{ or } \tanh y/c = \operatorname{dn} x/a$$

(the axis of y being a vertical asymptote), where $k' = c/a$ or a/c respectively, according as a, the ratio of the tension in gravitation measure to the density at the lowest point of the catenary, is greater or less than c.

Discuss the case when $a = c$.

xi. A light and uniformly flexible wire of length $2a$ passes through three rings A, B, C in the same horizontal line where $AB = BC = a$. Shew that if a small weight W be suspended from any point P_1 then the deflexion at P_2 is given by

$$Ma^3y = \tfrac{1}{24}W[2a^2(r^3 - r_1^3 - r_2^3) - r_1^2r_2^2(r_1 - 3a)(r_2 - 3a) \pm r_1r_2\{2a^2(r_1^2 + r_2^2) + 4a^4\}],$$

where r_1, r_2 are the *distances* of P_1 and P_2 from B, r the *distance* between P_1 and P_2, and the upper or lower sign is to be taken in the ambiguity according as P_1, P_2 do or do not lie on the same side of B; and where M is the flexural rigidity.

12. Prove that, if for a system symmetrical about the axis of z the potential

$$V = \frac{A_0}{r} + \frac{A_1Q_1}{r^2} + \frac{A_2Q_2}{r^3} + \ldots,$$

the lines of force will lie on the surfaces $U =$ constant, where

$$U = A_0\frac{dr}{dz} - \frac{A_1}{1\,|}\frac{d^2r}{dz^2} + \frac{A_2}{2\,|}\frac{d^3r}{dz^3} - \ldots.$$

xiii. A uniform string in the form of a circle of radius a rests on a smooth plane under a central repulsion whose measure at distance r is ga^n/r^n. Shew that if the string be slightly displaced so that initially it is at rest and in the form $r = a + \Sigma_{m=1}^{m=\infty} a_m \cos m\theta$, then at any subsequent time t its form will be determined by

$$r = a + \Sigma_{m=1}^{m=\infty} a_m \cos m\theta \cos m\left\{\frac{g}{a}\left(\frac{m^2 + n - 2}{m^2 + 1}\right)\right\}^{\frac{1}{2}} t.$$

Discuss this result when (i) $m = 1$ and $n = 1$, and (ii) when $n = 3$.

xiv. Shew that to the first order the effect of the oblateness of the sun will be to make the apse line advance in the plane of the orbit at the same rate as it makes the node regrede on the fixed plane of reference (supposed to contain the sun's equator); and further the eccentricity and inclination will be affected with periodic variations alone.

xv. A rectangular pipe whose faces are horizontal and vertical planes is completely filled with $(n+1)$ fluids; shew that the velocities of propagation of waves of length λ at the surfaces of separation of the strata are given by the equation

$$\begin{vmatrix} A_1 & -B_2 & \dots & \dots & \dots & \dots & \dots & \dots & \dots \\ -B_2 & A_2 & -B_3 & \dots & \dots & \dots & \dots & \dots & \dots \\ \dots & -B_3 & A_3 & -B_4 & \dots & \dots & \dots & \dots & \dots \\ \dots & \dots & -B_4 & A_4 & -B_5 & \dots & \dots & \dots & \dots \\ \dots & \dots & \dots & \dots & \dots & \dots & \dots & \dots & \dots \\ \dots & \dots & \dots & \dots & \dots & \dots & -B_{n-1} & A_{n-1} & -B_n \\ \dots & \dots & \dots & \dots & \dots & \dots & \dots & -B_n & A_n \end{vmatrix} = 0$$

where $A_m = 2\pi v^2/\lambda(\rho_{m+1}\coth 2\pi h_{m+1}/\lambda + \rho_m \coth 2\pi h_m/\lambda) - g(\rho_{m+1} - \rho_m)$, $B_m = 2\pi v^2/\lambda \operatorname{cosech} 2\pi h_m/\lambda$, and h_m is the equilibrium thickness of the stratum ρ_m.

In particular if $\rho_m = m\sigma$ and $h_m = ma$, then the $2n$ values of v are included in the formula

$$v = \pm \tfrac{1}{2}\sqrt{ga}\sec\left(\frac{m}{n+1}\frac{\pi}{2}\right),$$

where m is supposed to assume the values 1, 2, 3, ... n, and λ the wave-length is supposed very large compared with na.

xvi. If α_1, α_2, α_3 be any orthogonal co-ordinates, and u_1, u_2, u_3 the corresponding displacements, then the six strains can be put in the forms

$$h_1\frac{\partial u_1}{\partial \alpha_1} + u_2 h_1 h_3 \frac{\partial}{\partial \alpha_3}\left(\frac{1}{h_1}\right) + u_3 h_1 h_2 \frac{\partial}{\partial \alpha_2}\left(\frac{1}{h_1}\right)$$

.....

$$h_2\frac{\partial u_2}{\partial \alpha_2} + h_3\frac{\partial u_3}{\partial \alpha_3} - h_2 h_3\left[u_2\frac{\partial}{\partial \alpha_3}\left(\frac{1}{h_2}\right) + u_3\frac{\partial}{\partial \alpha_2}\left(\frac{1}{h_3}\right)\right],$$

.....

where
$$h^2 \equiv \left(\frac{\partial \alpha}{\partial x}\right)^2 + \left(\frac{\partial \alpha}{\partial y}\right)^2 + \left(\frac{\partial \alpha}{\partial z}\right)^2.$$

17. Water flows from a reservoir at temperature V through a permanently ice-cold tube of length a. Shew that the temperature at efflux is

$$V\exp\left\{\frac{cu}{2k} - \sqrt{\left(\frac{c^2u^2}{4k^2} + \frac{hl}{Ak}\right)}\right\}a,$$

where c is the thermal capacity per unit of volume of the water, k the interior conductivity, h the conductivity between the water and the tube, A the area and l the perimeter of the section of the tube, and u the velocity of flow.

18. Prove that if an infinite hollow cylinder of soft iron, of magnetic inductive capacity μ, bounded inside and outside respectively by the confocal elliptic cylinders

$$\frac{x^2}{a_1^2}+\frac{y^2}{b_1^2}=1, \quad \frac{x^2}{a_2^2}+\frac{y^2}{b_2^2}=1,$$

where
$$a_1^2-b_1^2=a_2^2-b_2^2=c^2,$$

be placed in a field of uniform magnetic force of which the potential is $Xx+Yy$, then inside the cylinder the magnetic potential will be reduced to $X'x+Y'y$, where

$$X'=\frac{\mu c^2(a_2+b_2)}{(\mu^2 a_1+b_1)(a_1b_2-a_2b_1)+\mu(a_1+b_1)(a_1a_2-b_1b_2)}X,$$

$$Y'=\frac{\mu c^2(a_2+b_2)}{(\mu^2 b_1+a_1)(a_1b_2-a_2b_1)+\mu(a_1+b_1)(a_1a_2-b_1b_2)}Y.$$

TUESDAY, *January* 8, 1884. $1\frac{1}{2}$ to $4\frac{1}{2}$.

[*Each candidate is not to send up answers to more than five questions.*]

1 A. PROVE that the solution of Riccati's equation

$$x\frac{dy}{dx}-ay+by^2=cx^p$$

can be made to depend upon the solution of Bessel's equation

$$r^2\frac{d^2w}{dr^2}+r\frac{dw}{dr}+(k^2r^2-n^2)\,w=0,$$

where $n=a/p$; and prove that Riccati's equation can be solved by algebraical and trigonometrical functions when $a/p=i+\frac{1}{2}$, where i is any integer.

Find the solution of Riccati's equation in this case; and solve

$$\frac{du}{dx}+bu^2=cx^{-4}.$$

2 A. Explain how to treat problems of relative maxima and minima in the Calculus of Variations.

Prove that the curve of a uniform chain of given length joining two fixed points is given by an equation of the form

$$y=b\,\mathrm{sn}\,K\frac{x}{a},$$

when the moment of inertia of the chain about a given fixed straight line, in a plane with the two given points, is a maximum; and by an equation of the form

$$y\,\mathrm{cn}\,K\frac{x}{a}=b,$$

when the moment of inertia is a minimum, the given straight line being taken as axis of x.

3 A. Shew that the remainders obtained by dividing n terms of an arithmetical progression whose first term is a and common difference d by n will be terms of an arithmetical progression whose common difference is the G.C.M. of d and n, where a and d are both integers.

Shew that the sum of the fractional parts of any n terms of the series obtained by dividing the arithmetical progression whose first term is a and common difference d will differ from the sum of the fractional parts of the same terms when a is put equal to zero by an integer.

4 A. Prove that the equation of the first negative central pedal of the ellipsoid $u \equiv a^2x^2 + b^2y^2 + c^2z^2 - 1 = 0$ is the discriminant, relative to t, of

$$\frac{x^2}{t(2-a^2t)} + \frac{y^2}{t(2-b^2t)} + \frac{z^2}{t(2-c^2t)} = 1.$$

Shew that the equation of the first positive central pedal of $\frac{x^2}{a^2} + \frac{y^2}{b^2} + \frac{z^2}{c^2} = 1$ with regard to the quadric can be obtained from the first negative central pedal of $u = 0$ by the substitution of $\frac{x}{a^2}$, $\frac{y}{b^2}$ and $\frac{z}{c^2}$ for x, y and z respectively.

5 A. Prove the addition formulæ for the three elliptic functions sn, cn and dn.

Prove that in the spherical triangle ABC, obtuse-angled at C, we may replace

$$\cos a \text{ by } \operatorname{cn} u \text{ and } \cos A \text{ by } \operatorname{dn} u;$$
$$\cos b \text{ by } \operatorname{cn} v \text{ and } \cos B \text{ by } \operatorname{dn} v;$$
$$\cos c \text{ by } \operatorname{cn}(u+v) \text{ and } \cos C \text{ by } -\operatorname{dn}(u+v),$$

and then $\cos^2 p = 1 - k^2 \operatorname{sn}^2 u \operatorname{sn}^2 v$, where p is the perpendicular arc from C on AB: and point out any other analogies between elliptic functions and spherical trigonometry.

6 B. Prove that the function which has the value $+1$ on the northern hemisphere and -1 on the southern is given in zonal harmonics by the series $\Sigma C_{2n+1} P_{2n+1}$ where

$$C_{2n+1} = (-1)^n \left\{ \frac{1.3.5 \ldots 2n-1}{2.4.6 \ldots 2n} + \frac{1.3.5 \ldots 2n+1}{2.4.6 \ldots 2n+2} \right\}.$$

Hence find a function which has the values $A+B$, $A-B$ on (i) the northern and southern, (ii) eastern and western, and (iii) any two corresponding hemispheres respectively; the axis of the earth being permanently the axis of the harmonics.

7 B. The kinetic energy of a system involves x, $\dot{x}$, y, $\dot{y}$, and $\dot{\phi}$ alone, and its potential energy is a function of x and y alone. Find the conditions of the existence of a steady motion in which x, y, and $\dot{\phi}$ are all constant; and indicate the method of discriminating between stability and instability.

A uniform circular disc spins on a smooth plane under the attraction of a centre of force on the other side of the plane. Shew that the steady motion in which the centre of the disc is at the foot of the perpendicular from the centre of force on the table is certainly not stable unless the mutual gravitation potential be in this position a maximum for variations in the plane of motion, and that the periods of vibration about a stable state are the one less and the other greater than the period of a rotation of the disc.

Discuss the case in which the disc attempts to rotate steadily about an eccentric point of itself coincident with the above-mentioned foot of the perpendicular from the centre of force on the plane.

8 B. Shew that assuming the equations of Lunar Theory, viz.:

$$\frac{d^2u}{d\theta^2}+u=\frac{\mu}{H^2}-\frac{m'}{a'^2u^3H^2}\left\{\tfrac{1}{2}+\tfrac{3}{2}\cos 2(\theta-\theta')+\frac{1}{u}\frac{du}{d\theta}\tfrac{3}{2}\sin 2(\theta-\theta')\right\},$$

$$\frac{dH^2}{d\theta}=-\frac{3m'}{a'^2u^2}\sin 2(\theta-\theta'),$$

then if the moon's orbit had no eccentricity independent of perturbation (i) the periodic time would be diminished in the ratio 675 : 676, and (ii) the orbit would tend to become an ellipse with its major axis in quadrature.

9 B. State, without proof, the leading steps required in arriving at those equations of planetary perturbation typically represented by

$$\frac{di}{dt}=\frac{m'na^2a'}{4\mu}D_1\tan i'\sin(\Omega-\Omega'),$$

$$\tan i\frac{d\Omega}{dt}=-\frac{m'na^2a'}{4\mu}D_1\{\tan i-\tan i'\cos(\Omega-\Omega')\},$$

and investigate the motion of the node and inclination of the orbit given by these equations.

Criticise the following:—In an isolated system made up of a very large primary and two small satellites the planes of the instantaneous orbits meet in a line about which both satellites have no angular momentum; the plane generated by this line is therefore fixed, being perpendicular to the axis of resultant angular momentum. Taking this plane for the fixed plane of reference the above equations either give $i=i'$ and $\dot{\Omega}$ constantly zero, or else give i and i' both constant and in addition

$$\text{(i)}\quad \frac{\tan i}{na/m}+\frac{\tan i'}{n'a'/m'}=0,\qquad \text{(ii)}\quad \dot{\Omega}=-\frac{mm'aa'}{4\mu}D_1\left[\frac{na}{m}+\frac{n'a'}{m'}\right]:$$

and clearly (i) need not necessarily hold good.

10 D. Establish the equality of $f(x)$ and the expression

$$\frac{1}{l}\int_0^l\frac{f(v)+f(-v)}{2}dv+\frac{2}{l}\Sigma_{n=1}^{n=\infty}\cos\frac{n\pi x}{l}\int_0^l\frac{f(v)+f(-v)}{2}\cos\frac{n\pi v}{l}dv$$
$$+\frac{2}{l}\Sigma_{n=1}^{n=\infty}\sin\frac{n\pi x}{l}\int_0^l\frac{f(v)-f(-v)}{2}\sin\frac{n\pi v}{l}dv,$$

and point out any necessary limitations.

Shew that, if all effects of atmosphere be neglected, then the intensity of daylight at a given place at t o'clock true solar time at an equinox will be

$$I\left[\frac{1}{\pi}+\frac{1}{2}\cos\frac{\pi t}{12}+\frac{2}{\pi}\left\{\frac{1}{1.3}\cos\frac{\pi t}{6}-\frac{1}{3.5}\cos 2\frac{\pi t}{6}+\frac{1}{5.7}\cos 3\frac{\pi t}{6}-\dots\right\}\right],$$

where I is the intensity at noon.

Examine the values of the above expression when (i) $t=0$, (ii) $t=6$, and (iii) $t=12$.

11 D. Taking the earth to be a sphere of uniform conductivity, find the permanent state of temperature induced by reason of the presence of the atmosphere, it being given that the temperature of the atmosphere is $A+B$ over one hemisphere and $A-B$ over the other (cf. 6 B).

Pass on to consider the variable state when the temperature of the atmosphere is given by (i) $A+B\sin nt$ and $A-B\sin nt$ and (ii) $A+B\sin(nt+\alpha)$ and $A+B\sin(nt+\beta)$ over the two hemispheres respectively.

12 D. Shew how to determine the charge induced by a given field on a given conductor (i) when the conductor is insulated, (ii) when uninsulated. Proceed and determine the force tending to move the conductor both when the latter is insulated and when it is uninsulated.

A spherical conductor is placed in a uniform field of intensity Z. Supposing its surface separated into two hemispheres by a plane perpendicular to the lines of force, find the resultant force on each hemisphere (i) when the conductor is insulated and has a charge E, (ii) when uninsulated; and shew that the resultant force on the whole sphere in the former case is EZ and in the latter zero.

13 D. Investigate the general question of the currents induced in an infinite plate by the movement of a magnetic system on one side, and shew how their effect may be determined by means of a moving image on the opposite side.

The resistance of a centimetre square of a plane sheet is σ, and a unit magnetic pole moves with velocity $(\sigma\tan\alpha)/2\pi$ parallel to the plane at a distance c. Prove that after a long time the potential due to the induced currents may be put in the form

$$\Omega=-\frac{\sin\alpha}{r}\,\frac{x+r\sin\alpha}{r+(z+c)\cos\alpha+x\sin\alpha},$$

where $r^2=x^2+(z+c)^2$.

A conducting sheet as above is perpendicular to a uniform magnetic field (strength H) and the centre of a thin uniformly magnetised bar of length l is moved with constant velocity $(\sigma\tan\alpha)/2\pi$ parallel to it at a distance $\frac{1}{2}l$. Shew that the strength of the pole of a magnet which places its length parallel to the plane will be

$$\frac{4}{\sin 2\alpha}\,\frac{(1+\sqrt{2}\cos\alpha)^2}{4\cos\alpha+3\sqrt{2}}\,Hl^2.$$

WEDNESDAY, *January* 9, 1884. 9 to 12.

SUBJECTS FOR ESSAYS.

[*Each candidate is not to send up more than two essays.*]

1 A. Linkages.

2 A. Ruled surfaces.

3 A. Linear transformations of elliptic functions.

4 B. Centrobaric bodies.

5 B. Precession and Nutation.

6 B. The principle of Least Action.

7 C. Forced vibrations.

8 C. Diffraction.

9 C. Waves of permanent type.

10 D. The thermodynamics of a perfect gas.

11 D. The electromagnetic theory of light.

12 D. Magnetic induction in soft iron, and its hydrokinetic analogies.

WEDNESDAY, *January* 9, 1884. $1\frac{1}{2}$ to $4\frac{1}{2}$.

[*Each candidate is not to send up answers to more than five questions.*]

1 A. EXPLAIN how to calculate the sum of the different powers and the symmetric functions of the roots of a given equation.

Prove that in the equation

$$x^n + \frac{x^{n-1}}{1\,!} + \frac{x^{n-2}}{2\,!} + \frac{x^{n-3}}{3\,!} + \ldots + \frac{1}{n\,!} = 0,$$

the sum of any power of the roots, from the second to the nth power, vanishes; and also that any non-unitary symmetric function whose weight is n or less than n, vanishes.

2 A. Shew that the condition that a triangle can be inscribed in one conic section and circumscribed about another is $\Theta^2 = 4\Delta\Theta'$.

A triangle inscribed in an ellipse envelopes a confocal ellipse. Through each vertex of the triangle an ellipse is drawn with its foci at the adjacent points of contact. Prove that the sum of the squares of the minor axes of these ellipses is constant.

3 A. Explain how to solve a linear difference equation with constant coefficients.

Air is pumped from a vessel of volume A into another vessel of volume B by means of a force-pump of volume C, but of which a volume D is untraversed by the piston of the pump. Supposing the operation to begin with the up stroke when the pressure in the interior is at the uniform atmospheric density ρ, then after n complete strokes the density in A and in B will be respectively

$$\rho_n = \rho - \rho\frac{C-D}{A+C}\frac{1-u^n}{1-u} \text{ and } \sigma_n = \rho + \rho\frac{A(C-D)}{(A+C)(B+D)}\frac{1-u^n}{1-u},$$

where $u = \dfrac{AB}{(A+C)(B+D)}$.

4 A. State and prove Jacobi's form for the third elliptic integral.

Prove, or verify by differentiation, that if x be less than a,

$$\int_0^x \frac{\operatorname{cn} a \operatorname{dn} a}{\operatorname{sn} a - \operatorname{sn} x}\,dx = \log\frac{\Theta_1 \frac{1}{2}(a+x)\,\Theta \frac{1}{2}(a+x)}{\Theta_2 \frac{1}{2}(a-x)\,\Theta_3 \frac{1}{2}(a-x)} - xZa + \log\frac{\operatorname{cn}\frac{1}{2}a \operatorname{dn}\frac{1}{2}a}{\operatorname{sn}\frac{1}{2}a},$$

$$\int_0^x \frac{\operatorname{cn} a \operatorname{dn} a}{\operatorname{sn} a + \operatorname{sn} x}\,dx = \log\frac{\Theta_3 \frac{1}{2}(a+x)\,\Theta_3 \frac{1}{2}(a+x)}{\Theta_1 \frac{1}{2}(a-x)\,\Theta \frac{1}{2}(a-x)} - xZa - \log\frac{\operatorname{cn}\frac{1}{2}a \operatorname{dn}\frac{1}{2}a}{\operatorname{sn}\frac{1}{2}a}.$$

5 A. Find the most probable values of the p unknowns $x, y, \ldots$ given by the m equations

$$\left.\begin{array}{l} a_1x + b_1y + \ldots = n_1 \\ a_2x + b_2y + \ldots = n_2 \\ \ldots\ldots\ldots\ldots\ldots\ldots \end{array}\right\},$$

where $a, b, \ldots$ are given constants and $n_1, n_2, \ldots$ observed quantities: and determine the mean error of each of the original observations $n_1, n_2, \ldots$

Shew that the determinant of the normal equations is always positive.

Find further the most probable values of $x, y, \ldots$ if in addition they be subject to q exact equations

$$\left.\begin{array}{l} A_1x + B_1y + \ldots = N_1 \\ A_2x + B_2y + \ldots = N_2 \\ \ldots\ldots\ldots\ldots\ldots\ldots \end{array}\right\},$$

and shew that the mean error of a standard observation is $\left\{\dfrac{[vv]}{m+q-p}\right\}^{\frac{1}{2}}$.

6 B. Enumerate the fundamental properties of Legendre's functions; and discuss how far they are true of the coefficients of α in the expansion of $(1-2\alpha x+\alpha^2)^{-\frac{2l+1}{2}}$, where l is a positive integer.

In particular shew that, if the coefficient of α^n be denoted by Z_n, it will satisfy the following equations:

(1) $\displaystyle\int_{-1}^{+1} Z_n Z_m dx = 0$, if m and n are unequal,

(2) $\displaystyle(1-x^2)\frac{d^2Z_n}{dx^2} - 2(l+1)x\frac{dZ}{dx} + n(n+2l+1)Z_n = 0,$

(3) $\displaystyle\frac{dZ_n}{dx} = \{2(n+l)-1\}Z_{n-1} + \{2(n+l)-5\}Z_{n-3} + \{2(n+l)-9\}Z_{n-5} + \ldots$

7 B. V_1 and V_0 are two functions of x, y, z which satisfy the equation $\nabla^2 V = 0$; the former remaining finite at all points within a given surface, the latter vanishing at infinity and further being equal to V_1 at all points of the given surface: evaluate by direct integration the potential through all space of the distribution on the surface of matter whose superficial density is

$$-\frac{1}{4\pi}\left(\frac{\partial V_1}{\partial n_1} + \frac{\partial V_0}{\partial n_0}\right).$$

Find a distribution of matter over an ellipsoid referred to its principal axes which shall produce at all points of itself a potential

$$Lyz + Mzx + Nxy.$$

8 B. Investigate from first principles the generalised equations of impulsive motion.

Apply general methods to the following examples:

Twelve equal rods are freely jointed so as to form a cubical framework which is suspended from a point by a string tied to one corner and held in shape by a string occupying the position of a vertical diagonal.

(a) Shew that, if the diagonal string be cut, then the initial acceleration of the centre of the cube will be $\frac{18}{25}g$.

(β) Shew that, if the other string be cut and the cube drops on to a hard smooth plane, then the velocity of the centre of the cube will be reduced to $\frac{18}{25}v$, where v is the velocity at striking.

Trace the analogy between the examples (α) and (β).

(γ) Shew that, if the framework lie flat on a smooth table, then the upward impulse at the uppermost central angle which will make the centre move with a velocity v will be $\frac{17}{27}Mv\ (\equiv Nv)$.

(δ) Shew that, if the uppermost angle be connected with a mass P by means of a vertical string passing over a smooth peg vertically above the centre of the framework, then the initial acceleration of the centre upwards will be

$$g\frac{P-\frac{1}{2}M}{P+\frac{1}{2}N};$$

and further trace any analogy between the cases (γ) and (δ).

9 B. Discuss the determination of the ellipticity of the earth by measurements of the lengths of the arcs drawn in any direction on the earth's surface.

Shew that, on the assumptions that the earth is an ellipsoid with its minor axis ($2c$) for axis of rotation, and that the ratio of the difference of the other two axes ($2a$ and $2b$) to either of them is a small quantity (i) whose square may be neglected, then the angle between arcs measured along a meridian of longitude ω and a parallel of latitude ϕ will be $\pi/2 - i\sin\phi\sin 2\omega - ip^2c^2\sin\phi\sin 2\omega$; where

$$1/p^2 = \tfrac{1}{2}(a^2+b^2)\cos^2\phi + c^2\sin^2\phi;$$

the colatitude of a place being the angle between the normal there and the axis of rotation, and a meridian of longitude ω being the locus of all points at which the normal is perpendicular to a line in the equatoreal plane which makes an angle ω with the mean axis.

What difference in the lengths of the equatoreal axes could be detected by geodetic observations in longitude $\pi/4$ and latitude $\pi/6$ in which an error of 75″ could be distinguished?

Shew also that the length of an arc of parallel (ϕ) between two places of longitudes ω_2 and ω_1 would be

$$\tfrac{1}{2}(a^2+b^2)\,p\cos\phi\{\omega_2-\omega_1-i(1+\tfrac{1}{2}\cos^2\phi)\sin\tfrac{1}{2}(\omega_2-\omega_1)\cos\tfrac{1}{2}(\omega_2+\omega_1)\}.$$

10 C. Prove that the equations of motion in two dimensions of a viscous liquid are of the form

$$\frac{1}{\rho}\frac{\partial p}{\partial x} = -\frac{du}{dt} + \mu'\nabla^2 u.$$

Hence shew that the stream function must satisfy the equation

$$\left(\mu'\nabla^2 - \frac{\partial}{\partial t}\right)\nabla^2\psi = \left(\frac{\partial\psi}{\partial y}\frac{\partial}{\partial x} - \frac{\partial\psi}{\partial x}\frac{\partial}{\partial y}\right)\nabla^2\psi.$$

A viscous fluid is contained between two smooth parallel plane boundaries ($x = \pm a$), unlimited in one direction, and closed by a rough plane ($y = 0$), which is capable of movement in its own plane in the direction of the axis of x. Prove that, if the cap be moved with a constant small velocity V, so that products of velocity in the fluid may be neglected, then after a long time when the motion is steady, ψ is given by

$$\psi = -(2Vy/\pi)\tan^{-1}\{(\cos\pi x/2a)(\operatorname{cosech}\pi y/2a)\}.$$

11 C. Supposing plane waves of sound to impinge obliquely at an angle β on the plane surface of separation of two uniform gases of densities ρ and ρ', calculate the intensities of the reflected and refracted waves.

Supposing the gases to be separated by a plane uniform flexible membrane, whose equation is $y=0$, of superficial density σ and tension T, and representing the displacements of the incident, reflected and refracted waves of sound and of the membrane by

(i) $B \sin \{m (x \sin \beta - y \cos \beta) - nt + \alpha\}$, (ii) $B_1 \sin \{m (x \sin \beta + y \cos \beta) - nt + \alpha_1\}$,

(iii) $B' \sin \{m' (x \sin \beta' - y \cos \beta') - nt + \alpha'\}$, (iv) $b \sin (mx \sin \beta - nt)$

respectively; find the relations to be satisfied; and prove that the ratio of the intensities of the reflected and incident waves is equal to

$$(Tm^2 \sin^2 \beta - \sigma n^2)^2 + (\rho' m' \sec \beta' - \rho m \sec \beta)^2 \ : \ (Tm^2 \sin^2 \beta - \sigma n^2)^2 + (\rho' m' \sec \beta' + \rho m \sec \beta)^2.$$

12 C. Determine the possible lateral vibrations of a thin uniform bar of oval section in which one end is clamped and the other free; and shew how the roots of the equation on which the frequencies depend may be approximately found.

A steel cylinder of small elliptical cross-section and length l centimetres is clamped at one end. The cross-section is such that the gravest note when the rod is struck in the direction of one axis, and the note next above the gravest when struck in the direction of the other, have both a frequency of 256 per sec. Shew that the semi-axes of the elliptical section must be about $0{\cdot}00179\, l^2$ and $0{\cdot}000286\, l^2$, the following data being given:—

Steel is 7·85 times as dense as water.

Young's modulus $= 2{\cdot}14 \times 10^{12}$ C.G.S. units.

The two smallest roots of the equation of frequency are 1·875 and 4·694.

13 C. Find the relation connecting the bending moments at three consecutive supports of a uniform elastic beam resting on a number of supports in a horizontal line.

Calculate the pressure on each support of a uniform beam which rests on four equidistant supports, the outer two being under the ends of the beam.

UNIVERSITY SCHOLARSHIPS AND CHANCELLOR'S MEDALS.

MONDAY, *January* 14, 1884. 9—12.

WRITE a Latin Essay on any one of the following subjects:

1. Neque illud ipsum, quod est optimum, desperandum est; et in praestantibus rebus magna sunt ea quae sunt optimis proxima. (Cic.)

2. Comparentur inter se Pericles, Nicias, Alcibiades.

3. De Q. Horatio Flacco, viro, poeta, philosopho.

4. Prosintne magis an obsint reipublicae suffragia per tabellas lata.

Place the Thesis, on which you write, outside your paper, and also at the head of the Essay.

MONDAY, *January* 14, 1884. 1 to 4.

TRANSLATE with short marginal notes where required:

(1)

nunc ea quae nobis membrorum dextera pars est,
in speculis fit ut in laeva videatur eo quod
planitiem ad speculi veniens cum offendit imago,
non convertitur incolumis, sed recta retrorsum
sic eliditur, ut siquis, prius arida quam sit
cretea persona, adlidat pilaeve trabive,
atque ea continuo rectam si fronte figuram
servet et elisam retro sese exprimat ipsa.
fiet ita, ante oculus fuerit qui dexter, ut idem
nunc sit laevus, et e laevo sit mutua dexter.
fit quoque de speculo in speculum ut tradatur imago,
quinque etiam sexve ut fieri simulacra suërint.
nam quaecumque retro parte interiore latebunt,
inde tamen, quamvis torte penitusque remota,
omnia per flexos aditus educta licebit
pluribus haec speculis videantur in aedibus esse.
usque adeo speculo in speculum translucet imago,
et cum laeva data est, fit rusum ut dextera fiat,
inde retro rursum redit et convertitur eodem.
quin etiam quaecumque latuscula sunt speculorum
adsimili lateris flexura praedita nostri,
dextera ea propter nobis simulacra remittunt,
aut quia de speculo in speculum transfertur imago,
inde ad nos elisa bis advolat, aut etiam quod
circum agitur, cum venit, imago propterea quod
flexa figura docet speculi convertier ad nos.

LUCRETIUS IV 292—317.

(2)

abiunctae paulo ante comae mea fata sorores
lugebant, cum se Memnonis Aethiopis
unigena inpellens nictantibus aera pennis
obtulit Arsinoes Locridos ales equos,
isque per aetherias me tollens avolat umbras
et Veneris casto collocat in gremio.
ipsa suum Zephyritis eo famulum legarat,
Graia Canopieis incola litoribus.
hic iuveni Ismario ne solum in lumine caeli
ex Ariadneis aurea temporibus
fixa corona foret, sed nos quoque fulgeremus
devotae flavi verticis exuviae,
uvidulam a fletu[1] cedentem ad templa deum me
sidus in antiquis diva novom posuit:
virginis et saevi contingens namque Leonis
lumina, Callisto iuncta Lycaoniae,
vertor in occasum, tardum dux ante Booten,
qui vix sero alto mergitur Oceano.
sed quamquam me nocte premunt vestigia divom,
lux autem canae Tethyi restituit,
(pace tua fari hic liceat, Rhamnusia virgo,
namque ego non ullo vera timore tegam,
nec si me infestis discerpent sidera dictis,
condita quin verei pectoris evoluam):
non his tam laetor rebus, quam me afore semper,
afore me a dominae vertice discrucior.

CATULLUS LXVI 51—76.

[1] *al.* fluctu. Adopt and explain whichever reading you prefer.

(3)

tum pater aeterno fatur devinctus amore
quid causas petis ex alto? fiducia cessit
quo tibi, diva, mei? similis si cura fuisset,
tum quoque fas nobis Teucros armare fuisset:
nec pater omnipotens Troiam nec fata vetabant
stare decemque alios Priamum superesse per annos.
et nunc, si bellare paras atque haec tibi mens est,
quidquid in arte mea possum promittere curae,
quod fieri ferro liquidove potest electro,
quantum ignes animaeque valent, absiste precando
viribus indubitare tuis. ea verba locutus
optatos dedit amplexus placidumque petivit
coniugis infusus gremio per membra soporem.
  inde ubi prima quies medio iam Noctis abactae
curriculo expulerat somnum, cum femina primum,
cui tolerare colo vitam tenuique Minerva
impositum, cinerem et sopitos suscitat ignes,
noctem addens operi, famulasque ad lumina longo
exercet penso, castum ut servare cubile
coniugis et possit parvos educere natos:
haut secus ignipotens nec tempore segnior illo
mollibus e stratis opera ad fabrilia surgit.

VIRGIL *Aeneid* VIII 394—415.

(4)

o nata mecum consule Manlio,
seu tu querellas sive geris iocos
  seu rixam et insanos amores
    seu facilem, pia testa, somnum,

quocumque lectum nomine Massicum
servas, moveri digna bono die,
  descende, Corvino iubente
    promere languidiora vina.

non ille, quamquam Socraticis madet
sermonibus, te negleget horridus:
  narratur et prisci Catonis
    saepe mero caluisse virtus.

tu lene tormentum ingenio admoves
plerumque duro; tu sapientium
  curas et arcanum iocoso
    consilium retegis Lyaeo;

tu spem reducis mentibus anxiis
viresque et addis cornua pauperi,
  post te neque iratos trementi
    regum apices neque militum arma.

te Liber et si laeta aderit Venus
segnesque nodum solvere Gratiae
  vivaeque producent lucernae,
    dum rediens fugat astra Phoebus.

HORACE *Odes* III xxi.

TUESDAY, *January* 15, 1884. 9 to 12.

GREEK VERSE.

1. For IAMBIC TRIMETERS:

(*Erminia to Tancred.*)

"Though gone, though dead, I love thee still; behold
Death wounds, but kills not love; yet if thou live,
Sweet soul, still in his breast, my follies bold
Ah, pardon, love's desires and stealths forgive;
Grant me from his pale mouth some kisses cold,
Since death doth love of just reward deprive;
And of thy spoils sad death afford me this,
Let me his mouth pale, cold, and bloodless kiss;

"O gentle mouth! with speeches kind and sweet
Thou didst relieve my grief, my woe, and pain;
Ere my weak soul from this frail body fleet,
Ah, comfort me with one dear kiss or twain!
Perchance, if we alive had hapt to meet,
They had been giv'n which now are stol'n! O vain,
O feeble life, betwixt his lips out-flie;
O let me kiss thee first, then let me die!"

FAIRFAX, *Tasso* XIX. 107.

2. For ANAPAESTIC TETRAMETERS CATALECTIC:

We wish to declare how the Birds of the air all high Institutions designed,
And holding in awe, art, science, and law, delivered the same to mankind.
To begin with: of old Man went naked and cold whenever it pelted or froze,
Till we showed him how feathers were proof against weathers; with that he bethought him of hose.
And next it was plain that he in the rain was forced to sit dripping and blind,
While the reed-warbler swung in a nest with her young, deep-sheltered and warm from the wind.
So our homes in the boughs made him think of the house; and the swallow, to help him invent,
Revealed the best way to economise clay, and bricks to combine with cement.

COURTHOPE, *Paradise of Birds* p. 106.

TUESDAY, *January* 15, 1884. 1 to 4.

TRANSLATE, adding short notes where requisite:

1. Ornatur igitur oratio genere primum et quasi colore quodam et suco suo. Nam ut gravis, ut suavis, ut erudita sit, ut liberalis, ut admirabilis, ut polita, ut sensus, ut doloris habeat quantum opus sit, non est singulorum articulorum; in toto spectantur haec corpore. ut porro conspersa sit quasi verborum sententiarumque floribus, id non debet esse fusum aequabiliter per omnem orationem, sed ita distinctum, ut sint quasi in ornatu disposita quaedam insignia et lumina. genus igitur dicendi est eligendum, quod maxime teneat eos, qui audiant, et quod non solum delectet, sed etiam sine satietate delectet: non enim a me iam exspectari puto, ut moneam, ut caveatis, ne exilis, ne inculta sit vestra oratio, ne volgaris, ne obsoleta; aliud quiddam maius et ingenia me hortantur vestra et aetates. difficile enim dictu est, quaenam causa sit, cur ea, quae maxime sensus nostros impellunt voluptate et specie prima acerrime commovent, ab iis celerrime fastidio quodam et satietate abalienemur. quanto colorum pulcritudine et varietate floridiora sunt in picturis novis pleraque quam in veteribus! quae tamen, etiamsi primo aspectu nos ceperunt, diutius non delectant; cum eidem nos in antiquis tabulis illo ipso horrido obsoletoque teneamur. quanto molliores sunt et delicatiores in cantu flexiones et falsae voculae quam certae et severae! quibus tamen non modo austeri, sed, si saepius fiunt, multitudo ipsa reclamat. licet hoc videre in reliquis sensibus, unguentis minus diu nos delectari summa et acerrima suavitate conditis, quam his moderatis et magis laudari, quod terram quam quod crocum sapere videatur; in ipso tactu esse modum et mollitudinis et levitatis.

CIC. *de oratore* III 25 §§ 96—99.

2. Ego, dum in provincia omnibus rebus Appium orno, subito sum factus accusatoris eius socer. Id quidem, inquis, di approbent! Ita velim, teque ita cupere certo scio. sed crede mihi, nihil minus putaram ego, qui de Ti. Nerone, qui mecum egerat, certos homines ad mulieres miseram, qui Romam venerunt factis sponsalibus. sed hoc spero melius. mulieres quidem valde intellego delectari obsequio et comitate adulescentis. cetera noli *ἐξακανθίζειν*. sed heus tu, *πυρούς εἰς δῆμον* Athenis? placet hoc tibi? etsi non impediebant mei certe libri—non enim ista largitio fuit in cives, sed in hospites liberalitas—, me tamen de Academiae *προπύλῳ* iubes cogitare, cum iam Appius de Eleusine non cogitet. de Hortensio te certo scio dolere: equidem excrucior. decreram enim cum eo valde familiariter vivere. nos provinciae praefecimus Caelium: puerum, inquies, et fortasse fatuum et non gravem et non continentem. Adsentior: fieri non potuit aliter. nam quas multo ante tuas acceperam litteras, in quibus *ἐπέχειν* te scripseras quid esset mihi faciendum de relinquendo, eae me pungebant. videbam enim quae tibi essent *ἐποχῆς* causae, et erant eaedem mihi: puero tradere? fratri autem? illud non utile nobis. nam praeter fratrem nemo erat quem sine contumelia quaestori, nobili praesertim, anteferrem.

CIC. *ad Atticum* VI 6.

3. Populus severior vindex fraudis erat; excitatique tandem duo tribuni plebis, Sp. et L. Carvilii, cum rem invisam infamemque cernerent, ducentum milium aeris multam M. Postumio dixerunt. cui certandae cum dies advenisset, conciliumque tam frequens plebis adesset, ut multitudinem area Capitolii vix caperet, perorata causa, una spes videbatur esse, si C. Servilius Casca tribunus plebis, qui propinquus cognatusque Postumio erat, priusquam ad suffragium tribus vocarentur, intercessisset. testibus datis, tribuni populum summoverunt, sitellaque lata est, ut sortirentur, ubi Latini suffragium ferrent. interim publicani Cascae instare, ut concilio diem eximeret; populus reclamare; et forte in cornu primus sedebat Casca, cui simul metus pudorque animum versabat. cum in eo parum praesidii esset, turbandae rei causa publicani per vacuum summoto locum cuneo irruperunt, iurgantes simul cum populo tribunisque. nec procul dimicatione res erat, cum Fulvius consul tribunis 'Nonne videtis' inquit, 'vos in ordinem coactos esse et rem ad seditionem spectare, ni propere dimittitis plebis concilium?'

LIV. XXV 3 13—19.

4. Sed volgo maxima haec pugna est, si coactam in verticem aquarum quoque figuram credere cogatur. atqui non aliud in rerum natura adspectu manifestius. namque et dependentes ubique guttae parvis globantur orbibus et pulveri inlatae frondiumque lanugini impositae absoluta rotunditate cernuntur, et in poculis repletis media maxime tument, quae propter subtilitatem umoris mollitiamque in se residentem ratione facilius quam visu deprehenduntur. idque etiam magis mirum, in poculis repletis addito umore minimo circumfluere quod supersit, contra evenire ponderibus additis ad vicenos saepe denarios, scilicet quia intus recepta liquorem in verticem attollant, at cumulo eminenti infusa delabantur. eadem est causa propter quam e navibus terra non cernatur e navium malis conspicua, ac procul recedente navigio, si quid quod fulgeat religetur in mali cacumine, paulatim descendere videatur et postremo occultetur. denique oceanus, quem fatemur ultimum, quanam alia figura cohaereret atque non decideret nullo ultra margine includente? ipsum ad miraculum redit, quonam modo, etiamsi globetur, extremum non decidat mare. contra quod, ut sint plana maria et qua videntur figura, non posse id accidere magno suo gaudio magnaque gloria inventores Graeci subtilitate geometrica docent. namque cum e sublimi in inferiora aquae ferantur, et sit haec natura earum confessa, nec quisquam dubitet in litore ullo accessisse eas quo longissime devexitas passa sit, procul dubio adparere quo quid humilius sit propius a centro esse terrae, omnesque linias quae emittantur ex eo ad proximas aquas breviores fieri quam quae ad extremum mare a primis aquis, ergo totas omnique ex parte aquas vergere in centrum, ideoque non decidere, quoniam in interiora nitantur.

PLIN. *n. h.* II 163—165.

5. Isdem consulibus ludi saeculares octingentesimo post Romam conditam, quarto et sexagesimo, quam Augustus ediderat, spectati sunt. utriusque principis rationes praetermitto, satis narratas libris, quibus res imperatoris Domitiani composui. nam is quoque edidit ludos saeculares, iisque intentius affui sacerdotio quindecimvirali praeditus ac tunc praetor. quod non iactantia refero, sed quia collegio quindecimvirum antiquitus ea cura, et magistratus potissimum exequebantur officia caerimoniarum. sedente Claudio circensibus ludis, cum pueri nobiles equis ludicrum Troiae inirent, interque eos Britannicus imperatore genitus et L. Domitius adoptione mox in inperium et cognomentum Neronis adscitus, favor plebis acrior in Domitium loco praesagii acceptus est. vulgabaturque adfuisse infantiae eius dracones in modum custodum, fabulosa et externis miraculis adsimilata: nam ipse, haudquaquam sui detractor, unam omnino anguem in cubiculo visam narrare solitus est: verum inclinatio populi supererat ex memoria Germanici, cuius illa reliqua suboles virilis.

TAC. *an.* XI 11 12.

WEDNESDAY, *Jan.* 16, 1884. 9—12.

For LATIN HEXAMETERS:

Meanwhile the Prince, who 'mid the close-set throng
Of humbler guests was hidden, saw her come
And turn ere she had marked him, and again
Down the long line of princely revellers
Pass slow as in a dream; and all his soul
Grew sick with dread lest haply, seeing not
The one expected face, and being meek
And dutiful and reverencing her sire,
She in despair might make some sudden choice
And leave him without love. And as she went,
He could not choose but gaze, as oft in sleep
Some dreadful vision chains us, that we fail
To speak or move, though to be still is death.
And once he feared that she had looked on him
And passed, and once he thought he saw her pause
By some tall comely youth; and then she reached
The opposite end, and as she turned her face
And came toward him again, and where the jars
Of sweet wine stood for mingling, with a bound
His heart went out to her; for now her cheek
Pale as the white moon sailing through the sky,
And the dead hope within her eyes, and pain
And hardly conquered tears, made sure his soul
Knowing that she was his.

L. MORRIS, *Odatis.*

For LATIN LYRICS or ELEGIACS:

Who are these coming to the sacrifice?
  To what green altar, O mysterious priest,
Lead'st thou that heifer lowing at the skies,
  And all her silken flanks with garlands drest?
What little town by river or sea-shore,
  Or mountain-built with peaceful citadel,
Is emptied of its folk this pious morn?
  And, little town, thy streets for evermore
Will silent be; and not a soul to tell
  Why thou art desolate, can e'er return.

KEATS, *Ode on a Grecian Urn.*

WEDNESDAY, *January* 16, 1884. 1—4.

TRANSLATE, with short marginal notes:

1. εἰσὶ δέ σφι φοίνικες πεφυκότες ἀνὰ πᾶν τὸ πεδίον, οἱ πλεῦνες αὐτῶν καρποφόροι, ἐκ τῶν καὶ σιτία καὶ οἶνον καὶ μέλι ποιεῦνται· τοὺς συκεέων τρόπον θεραπεύουσι τά τε ἄλλα, καὶ φοινίκων, τοὺς ἔρσενας Ἕλληνες καλέουσι, τούτων τὸν καρπὸν περιδέουσι τῇσι βαλανηφόροισι τῶν φοινίκων, ἵνα πεπαίνῃ τέ σφι ὁ ψὴν τὴν βάλανον ἐσδύνων καὶ μὴ ἀπορρέῃ ὁ καρπὸς [ὁ] τοῦ φοίνικος· ψῆνας γὰρ δὴ φορέουσι ἐν τῷ καρπῷ οἱ ἔρσενες, κατά περ δὴ οἱ ὄλυνθοι. τὸ δὲ ἀπάντων θῶυμα μέγιστόν μοί ἐστι τῶν ταύτῃ μετά γε αὐτὴν τὴν πόλιν, ἔρχομαι φράσων. τὰ πλοῖα αὐτοῖσί ἐστι τὰ κατὰ τὸν ποταμὸν πορευόμενα ἐς τὴν Βαβυλῶνα ἐόντα κυκλοτερέα πάντα σκύτινα· ἐπεὰν γὰρ ἐν τοῖσι Ἀρμενίοισι τοῖσι κατύπερθε Ἀσσυρίων οἰκημένοισι νομέας ἰτέης ταμόμενοι ποιήσωνται, περιτείνουσι τούτοισι διφθέρας στεγαστρίδας ἔξωθεν ἐδάφεος τρόπον, οὔτε πρύμνην ἀποκρίνοντες οὔτε πρῴρην συνάγοντες, ἀλλ' ἀσπίδος τρόπον κυκλοτερέα ποιήσαντες καὶ καλάμης πλήσαντες πᾶν τὸ πλοῖον τοῦτο ἀπιεῖσι κατὰ τὸν ποταμὸν φέρεσθαι, φορτίων πλήσαντες· μάλιστα δὲ βίκους φοινικηΐου κατάγουσι οἴνου πλέους. ἰθύνεται δὲ ὑπό τε δύο πλήκτρων καὶ δύο ἀνδρῶν ὀρθῶν ἑστεώτων, καὶ ὁ μὲν ἔσω ἕλκει τὸ πλῆκτρον, ὁ δὲ ἔξω ὠθέει. ποιέεται δὲ καὶ κάρτα μεγάλα ταῦτα τὰ πλοῖα καὶ ἐλάσσω· τὰ δὲ μέγιστα αὐτῶν καὶ πεντακισχιλίων ταλάντων γόμον ἔχει. ἐν ἑκάστῳ δὲ πλοίῳ ὄνος ζωὸς ἔνεστι, ἐν δὲ τοῖσι μέζοσι πλεῦνες. ἐπεὰν ὧν ἀπίκωνται πλώοντες ἐς τὴν Βαβυλῶνα καὶ διαθέωνται τὸν φόρτον, νομέας μὲν τοῦ πλοίου καὶ τὴν καλάμην πᾶσαν ἀπ' ὧν ἐκήρυξαν, τὰς δὲ διφθέρας ἐπισάξαντες ἐπὶ τοὺς ὄνους ἀπελαύνουσι ἐς τοὺς Ἀρμενίους.

HERODOTUS, I. 193.

2. κατ' οὐδὲν τοίνυν, ὦ ἄνδρες Ἀθηναῖοι, δίκαιον οὐδὲν ἔχων εἰπεῖν ἀναιδεστάτους λόγους ἐτόλμα λέγειν πρὸς τῷ διαιτητῇ, περὶ ὧν προακηκοέναι βέλτιόν ἐσθ' ὑμᾶς, ἕνα μὲν τὸ παράπαν μὴ γενέσθαι διαθήκην, ἀλλ' εἶναι τοῦτο πλάσμα καὶ σκευώρημα ὅλον, ἕτερον δ' ἕνεκα τούτου πάντα ταῦτα συγχωρεῖν τὸν πρὸ τοῦ χρόνον καὶ οὐχὶ δικάζεσθαι, ὅτι μίσθωσιν ἤθελεν αὐτῷ φέρειν Φορμίων πολλὴν καὶ ὑπισχνεῖτο οἴσειν· ἐπεὶ δ' οὐ ποιεῖ ταῦτα, τηνικαῦτα, φησί, δικάζομαι. ὅτι δὲ ταῦτ' ἀμφότερ', ἐὰν λέγῃ, ψεύσεται καὶ τοῖς ὑφ' ἑαυτοῦ πεπραγμένοις ἐναντία ἐρεῖ, σκοπεῖτε ἐκ τωνδί. ὅταν μὲν τοίνυν τὴν διαθήκην ἀρνῆται, ἐκ τίνος τρόπου πρεσβεῖα λαβὼν τὴν συνοικίαν κατὰ τὴν διαθήκην ἔχει, τοῦτ' ἐρωτᾶτ' αὐτόν. οὐ γὰρ ἐκεῖνό γ' ἐρεῖ, ὡς ὅσα μὲν πλεονεκτεῖν τόνδ' ἔγραψεν ὁ πατήρ, κύριά ἐστι τῆς διαθήκης, τὰ δ' ἄλλα ἄκυρα. ὅταν δ' ὑπὸ τῶν τοῦδε ὑποσχέσεων ὑπάγεσθαι φῇ, μέμνησθ' ὅτι μάρτυρας ὑμῖν παρεσχήμεθα, οἳ χρόνον πολὺν τοῦδ' ἀπηλλαγμένου μισθωταὶ τούτοις ἐγίγνοντο τῆς τραπέζης καὶ τοῦ ἀσπιδοπηγείου. καίτοι τόθ', ὁπηνίκα ἐμίσθωσεν ἐκείνοις, τῷδ' ἐγκαλεῖν παραχρῆμα ἐχρῆν, εἴπερ ἀληθῆ ἦν ὑπὲρ ὧν τότ' ἀφεὶς νῦν τούτῳ δικάζεται. ὡς τοίνυν ἀληθῆ λέγω, καὶ πρεσβεῖά τε τὴν συνοικίαν ἔλαβε κατὰ τὴν διαθήκην καὶ τῷδε οὐχ ὅπως ἐγκαλεῖν ᾤετο δεῖν, ἀλλ' ἐπῄνει, λαβὲ τὴν μαρτυρίαν.

DEMOSTHENES, *ὑπὲρ Φορμ.* 954.

3.[7] ΠΡ. ἆρ' οὖν λέγεις, ὅταν τις ἐμὲ φῇ Πρώταρχον ἕνα γεγονότα φύσει πολλοὺς εἶναι πάλιν τοὺς ἐμὲ καὶ ἐναντίους ἀλλήλοις, μέγαν καὶ σμικρὸν τιθέμενος καὶ βαρὺν καὶ κοῦφον τὸν αὐτὸν καὶ ἄλλα μυρία; Σ. σὺ μέν, ὦ Πρώταρχε, εἴρηκας τὰ δεδημευμένα τῶν θαυμαστῶν περὶ τὸ ἓν καὶ πολλά, συγκεχωρημένα δὲ ὡς ἔπος εἰπεῖν ὑπὸ πάντων ἤδη μὴ δεῖν τῶν τοιούτων ἅπτεσθαι, παιδαριώδη καὶ ῥᾴδια καὶ σφόδρα τοῖς λόγοις ἐμπόδια ὑπολαμβανόντων γίγνεσθαι, ἐπεὶ μηδὲ τὰ τοιάδε, ὅταν τις ἑκάστου τὰ μέλη τε καὶ ἄλλα μέρη διελὼν τῷ λόγῳ, πάντα ταῦτα τὸ ἓν ἐκεῖνο εἶναι διομολογησάμενος, ἐλέγχῃ καταγελῶν ὅτι τέρατα διηνάγκασται φάναι, τό τε ἓν ὡς πολλά ἐστι καὶ ἄπειρα, καὶ τὰ πολλὰ ὡς ἓν μόνον. ΠΡ. σὺ δὲ δὴ ποῖα, ὦ Σώκρατες, ἕτερα λέγεις, ἃ μήπω συγκεχωρημένα δεδήμευται περὶ τὸν αὐτὸν τοῦτον λόγον; Σ. ὁπόταν, ὦ παῖ, τὸ ἓν μὴ τῶν γιγνομένων τε καὶ ἀπολλυμένων τις τιθῆται, καθάπερ ἀρτίως ἡμεῖς εἴπομεν. ἐνταυθοῖ μὲν γὰρ καὶ τὸ τοιοῦτον ἕν, ὅπερ εἴπομεν νῦν δή, συγκεχώρηται τὸ μὴ δεῖν ἐλέγχειν· ὅταν δέ τις ἕνα ἄνθρωπον ἐπιχειρῇ τίθεσθαι καὶ βοῦν ἕνα καὶ τὸ καλὸν ἓν καὶ τὸ ἀγαθὸν ἕν, περὶ τούτων τῶν ἑνάδων καὶ τῶν τοιούτων ἡ πολλὴ ἀμφισβήτησις γίγνεται. ΠΡ. πῶς; Σ. πρῶτον μὲν εἴ τινας δεῖ τοιαύτας εἶναι μονάδας ὑπολαμβάνειν ἀληθῶς οὔσας· εἶτα πῶς αὖ ταύτας, μίαν ἑκάστην οὖσαν ἀεὶ τὴν αὐτὴν καὶ μήτε γένεσιν μήτε ὄλεθρον προσδεχομένην, ὅμως εἶναι βεβαιότατα μίαν ταύτην· μετὰ δὲ τοῦτ' ἐν τοῖς γιγνομένοις αὖ καὶ ἀπείροις εἴτε διεσπασμένην καὶ πολλὰ γεγονυῖαν θετέον, εἰθ' ὅλην αὐτὴν αὑτῆς χωρίς, ὃ δὴ πάντων ἀδυνατώτατον φαίνοιτ' ἄν, ταὐτὸν καὶ ἓν ἅμα ἐν ἑνί τε καὶ πολλοῖς γίγνεσθαι. ταῦτ' ἔστι τὰ περὶ τὰ τοιαῦτα ἓν καὶ πολλά, ἀλλ' οὐκ ἐκεῖνα, ὦ Πρώταρχε, ἁπάσης ἀπορίας αἴτια μὴ καλῶς ὁμολογηθέντα, καὶ εὐπορίας ἂν αὖ καλῶς.

PLATO, *Philebus* 14.

4. ἡ δὲ καπηλικὴ ποιητικὴ χρημάτων, οὐ πάντως ἀλλ' ἢ διὰ χρημάτων μεταβολῆς. καὶ δοκεῖ περὶ τὸ νόμισμα αὕτη εἶναι· τὸ γὰρ νόμισμα στοιχεῖον καὶ πέρας τῆς ἀλλαγῆς ἐστιν. καὶ ἄπειρος δὴ οὗτος ὁ πλοῦτος ὁ ἀπὸ ταύτης τῆς χρηματιστικῆς. ὥσπερ γὰρ ἡ ἰατρικὴ τοῦ ὑγιαίνειν εἰς ἄπειρόν ἐστι καὶ ἑκάστη τῶν τεχνῶν τοῦ τέλους εἰς ἄπειρον (ὅτι μάλιστα γὰρ ἐκεῖνο βούλονται ποιεῖν), τῶν δὲ πρὸς τὸ τέλος οὐκ εἰς ἄπειρον (πέρας γὰρ τὸ τέλος πάσαις), οὕτω καὶ ταύτης τῆς χρηματιστικῆς οὐκ ἔστι τοῦ τέλους πέρας, τέλος δὲ ὁ τοιοῦτος πλοῦτος καὶ χρημάτων κτῆσις. τῆς δ' οἰκονομικῆς, οὐ χρηματιστικῆς, ἔστι πέρας· οὐ γὰρ τοῦτο τῆς οἰκονομικῆς ἔργον. διὸ τῇ μὲν φαίνεται ἀναγκαῖον εἶναι παντὸς πλούτου πέρας, ἐπὶ δὲ τῶν γινομένων ὁρῶμεν συμβαῖνον τοὐναντίον· πάντες γὰρ εἰς ἄπειρον αὔξουσιν οἱ χρηματιζόμενοι τὸ νόμισμα. αἴτιον δὲ τὸ σύνεγγυς αὐτῶν· ἐπαλλάττει γὰρ ἡ χρῆσις τοῦ αὐτοῦ οὖσα ἑκατέρα τῆς χρηματιστικῆς (τῆς γὰρ αὐτῆς ἐστι χρήσεως κτῆσις ἀλλ' οὐ κατὰ ταὐτόν, ἀλλὰ τῆς μὲν ἕτερον τέλος τῆς δ' ἡ αὔξησις)· ὥστε δοκεῖ τισι τοῦτ' εἶναι τῆς οἰκονομικῆς ἔργον, καὶ διατελοῦσιν ἢ σώζειν οἰόμενοι δεῖν ἢ αὔξειν τὴν τοῦ νομίσματος οὐσίαν εἰς ἄπειρον. αἴτιον δὲ ταύτης τῆς διαθέσεως τὸ σπουδάζειν περὶ τὸ ζῆν ἀλλὰ μὴ τὸ εὖ ζῆν· εἰς ἄπειρον οὖν ἐκείνης τῆς ἐπιθυμίας οὔσης, καὶ τῶν ποιητικῶν ἀπείρων ἐπιθυμοῦσιν.

ARISTOTLE, *Politics* I. 9.

THURSDAY, *January* 17, 1884. 9 to 12.

TRANSLATE into GREEK PROSE:

There are infirmities not onely of Body, but of Soul, and Fortunes, which do require the merciful hand of our abilities. I cannot contemn a man for ignorance, but behold him with as much pity as I do Lazarus. It is no greater Charity to cloath his body, than apparel the nakedness of his Soul. It is an honourable object to see the reasons of other men wear our Liveries, and their borrowed understandings do homage to the bounty of ours: it is the cheapest way of beneficence, and, like the natural charity of the Sun, illuminates another without obscuring itself. To be reserved and caitiff in this part of goodness, is the sordidest piece of covetousness, and more contemptible than pecuniary Avarice. To this (as calling myself a Scholar) I am obliged by the duty of my condition: I make not therefore my head a grave, but a treasure, of knowledge; I intend no Monopoly, but a community in learning; I study not for my own sake only, but for theirs that study not for themselves. I envy no man that knows more than myself, but pity them that know less. I instruct no man as an exercise of my knowledge, or with an intent rather to nourish and keep it alive in mine own head than beget and propagate it in his: and in the midst of all my endeavours there is but one thought that dejects me, that my acquired parts must perish with my self, nor can be Legacied among my honoured Friends. I cannot fall out or contemn a man for an errour, or conceive why a difference of opinion should divide an affection; for Controversies, Disputes, and Argumentations, both in Philosophy and in Divinity, if they meet with discreet and peaceable natures, do not infringe the Laws of Charity. In all disputes, so much as there is of passion, so much there is of nothing to the purpose; for then Reason, like a bad Hound, spends upon a false Scent, and forsakes the question first started. SIR THOMAS BROWNE.

THURSDAY, *January* 17, 1884. 1 to 4.

TRANSLATE, with brief marginal notes, keeping each passage separable:

(1) τόφρα δ' ἔνεικε τέρετρα Καλυψώ, δῖα θεάων·
τέτρηνεν δ' ἄρα πάντα, καὶ ἤρμοσεν ἀλλήλοισιν·
γόμφοισιν δ' ἄρα τήνγε καὶ ἁρμονίῃσιν ἄρηρεν.
ὅσσον τίς τ' ἔδαφος νηὸς τορνώσεται ἀνὴρ
φορτίδος εὐρείης, εὖ εἰδὼς τεκτοσυνάων,
τόσσον ἔπ' εὐρεῖαν σχεδίην ποιήσατ' Ὀδυσσεύς·
ἴκρια δὲ στήσας, ἀραρὼν θαμέσι σταμίνεσσιν
ποίει, ἀτὰρ μακρῇσιν ἐπηγκενίδεσσι τελεύτα.
ἐν δ' ἱστὸν ποίει καὶ ἐπίκριον ἄρμενον αὐτῷ·
πρὸς δ' ἄρα πηδάλιον ποιήσατο, ὄφρ' ἰθύνοι·
φράξε δέ μιν ῥίπεσσι διαμπερὲς οἰσυΐνῃσιν,
κύματος εἶλαρ ἔμεν· πολλὴν δ' ἐπεχεύατο ὕλην·
τόφρα δὲ φάρε' ἔνεικε Καλυψώ, δῖα θεάων,
ἵστια ποιήσασθαι· ὁ δ' εὖ τεχνήσατο καὶ τά.
ἐν δ' ὑπέρας τε κάλους τε πόδας τ' ἐνέδησεν ἐν αὐτῇ·
μόχλοισιν δ' ἄρα τήνγε κατείρυσεν εἰς ἅλα δῖαν.

HOM. *Od.* v. 246.

στάντες δ', ὅθ' αὐτοὺς οἱ τεταγμένοι βραβῆς
κλήροις ἔπηλαν, καὶ κατέστησαν δίφρους,
χαλκῆς ὑπαὶ σάλπιγγος ᾖξαν· οἱ δ' ἅμα
ἵπποις ὁμοκλήσαντες, ἡνίας χεροῖν
ἔσεισαν· ἐν δὲ πᾶς ἐμεστώθη δρόμος
κτύπου κροτητῶν ἁρμάτων· κόνις δ' ἄνω
φορεῖθ'· ὁμοῦ δὲ πάντες ἀναμεμιγμένοι
φείδοντο κέντρων οὐδέν, ὡς ὑπερβάλοι
χνόας τις αὐτῶν καὶ φρυάγμαθ' ἱππικά.
ὁμοῦ γὰρ ἀμφὶ νῶτα καὶ τροχῶν βάσεις
ἤφριζον, εἰσέβαλλον ἱππικαὶ πνοαί.
κεῖνος δ' ὑπ' αὐτὴν ἐσχάτην στήλην ἔχων
ἔχριμπτ' ἀεὶ σύριγγα, δεξιόν τ' ἐνεὶς
σειραῖον ἵππον, εἶργε τὸν προσκείμενον.
καὶ πρὶν μὲν ὀρθοὶ πάντες ἕστασαν δίφροι·
ἔπειτα δ' Αἰνιᾶνος ἀνδρὸς ἄστομοι
πῶλοι βίᾳ φέρουσιν, ἐκ δ' ὑποστροφῆς,
τελοῦντες ἕκτον ἕβδομόν τ' ἤδη δρόμον,
μέτωπα συμπαίουσι Βαρκαίοις ὄχοις·
κἀντεῦθεν ἄλλος ἄλλον, ἐξ ἑνὸς κακοῦ,
ἔθραυε, κἀνέπιπτε· πᾶν δ' ἐπίμπλατο
ναυαγίων Κρισαῖον ἱππικῶν πέδον.
γνοὺς δ' οὐξ Ἀθηνῶν δεινὸς ἡνιοστρόφος
ἔξω παρασπᾷ, κἀνακωχεύει, παρεὶς
κλύδων' ἔφιππον ἐν μέσῳ κυκώμενον.

SOPH. *El.* 709.

(3) οὐδ' ὅτε πρῶτόν γ' ἦρξε διδάσκειν, ἀνθρώποις φήσ' ἐπιθέσθαι,
ἀλλ' Ἡρακλέους ὀργήν τιν' ἔχων τοῖσι μεγίστοις ἐπιχειρεῖν,
θρασέως ξυστὰς εὐθὺς ἀπ' ἀρχῆς αὐτῷ τῷ καρχαρόδοντι,
οὗ δεινόταται μὲν ἀπ' ὀφθαλμῶν Κύννης ἀκτῖνες ἔλαμπον,
ἑκατὸν δὲ κύκλῳ κεφαλαὶ κολάκων οἰμωξομένων ἐλιχμῶντο
περὶ τὴν κεφαλήν· φωνὴν δ' εἶχεν χαράδρας ὄλεθρον τετοκυίας.
τοιοῦτον ἰδὼν τέρας οὐ φησὶν δείσας καταδωροδοκῆσαι,
ἀλλ' ὑπὲρ ὑμῶν ἔτι καὶ νυνὶ πολεμεῖν· φησίν τε μετ' αὐτοῦ
τοῖς ἡπιάλοις ἐπιχειρῆσαι πέρυσιν καὶ τοῖς πυρετοῖσιν,
οἳ τοὺς πατέρας τ' ἤγχον νύκτωρ καὶ τοὺς πάππους ἀπέπνιγον,
κατακλινόμενοί τ' ἐπὶ ταῖς κοίταις ἐπὶ τοῖσιν ἀπράγμοσιν ὑμῶν
ἀντωμοσίας καὶ προσκλήσεις καὶ μαρτυρίας συνεκόλλων,
ὥστ' ἀναπηδᾶν δειμαίνοντας πολλοὺς ὡς τὸν πολέμαρχον.
τοιόνδ' εὑρόντες ἀλεξίκακον τῆς χώρας τῆσδε καθαρτήν,
πέρυσιν καταπρούδοτε καινοτάταις σπείροντ' αὐτὸν διανοίαις,
ἃς ὑπὸ τοῦ μὴ γνῶναι καθαρῶς ὑμεῖς ἐποιήσατ' ἀναλδεῖς·
καίτοι σπένδων πόλλ' ἐπὶ πολλοῖς ὄμνυσιν τὸν Διόνυσον,
μὴ πώποτ' ἀμείνον' ἔπη τούτων κωμῳδικὰ μηδέν' ἀκοῦσαι.
τοῦτο μὲν οὖν ἔσθ' ὑμῖν αἰσχρὸν τοῖς μὴ γνοῦσιν παραχρῆμα,
ὁ δὲ ποιητὴς οὐδὲν χείρων παρὰ τοῖσι σοφοῖς νενόμισται,
εἰ παρελαύνων τοὺς ἀντιπάλους τὴν ἐπίνοιαν ξυνέτριψεν.

ἀλλὰ τὸ λοιπὸν τῶν ποιητῶν,
ὦ δαιμόνιοι, τοὺς ζητοῦντας
καινόν τι λέγειν κἀξευρίσκειν
στέργετε μᾶλλον καὶ θεραπεύετε,
καὶ τὰ νοήματα σώζεσθ' αὐτῶν·
εἰσβάλλετε δ' εἰς τὰς κιβωτοὺς
μετὰ τῶν μήλων.
κἂν ταῦτα ποιῆθ', ὑμῖν δι' ἔτους
τῶν ἱματίων
ὀζήσει δεξιότητος. ARISTOPH. *Vesp.* 1029.

(4) πότνι' Ἀθηνάων ἐπιήρανε, Τριτογένεια,
ἥ τ' ἐπὶ ἔργα βροτῶν ὁράᾳς, Ῥαμνουσιὰς Οὖπι,
γείτονες ἀγχίθυροι Ῥώμης ἑκατοντοπύλοιο,
πίονα δὴ καὶ τόνδε, Θεά, τιμήσατε χῶρον,
δῆμον Δηώοιο φιλόξεινον Τριόπαο,
τόφρα κε καὶ Τριόπειαι ἐν ἀθανάτοις ἀλέγησθον.
ὡς ὅτε καὶ Ῥαμνοῦντα καὶ εὐρυχόρους ἐς Ἀθήνας
ἤλθετε, δώματα πατρὸς ἐριγδούποιο λιποῦσαι,
ὧς τήνδε ῥώεσθε πολυστάφυλον κατ' ἀλωήν,
λήϊά τε σταχύων καὶ δένδρεα βοτρυόεντα
λειμώνων τε κόμας ἀπαλοτρεφέων ἐφέπουσαι.
ὕμμι γὰρ Ἡρώδης ἱερὴν ἀνὰ γαῖαν ἔηκε,
τὴν ὅσσην περὶ τεῖχος ἐὔτροχον ἐστεφάνωται,
ἀνδράσιν ὀψιγόνοισιν ἀκινήτην καὶ ἄσυλον
ἔμμεναι. ἡ δ' ἐπί οἱ ἐξ ἀθανάτοιο καρήνου
σμερδαλέον σείσασα λόφον κατένευσεν Ἀθήνη,
μή τῳ νήποινον βῶλον μίαν ἢ ἕνα λᾶαν
ὀχλίσσαι, ἐπεὶ οὐ Μοιρέων ἀτρῆες ἀνάγκαι,
ὅς κε θεῶν ἐδέεσσιν ἀλιτροσύνην ἀναθείη.
κλῦτε, περικτίονες καὶ γείτονες ἀγροιῶται·
ἱερὸς οὗτος ὁ χῶρος, ἀκίνητοί τε θέαιναι
καὶ πολυτίμητοι καὶ ὑποσχεῖν οὖας ἑτοῖμαι·
μηδέ τις ἡμερίδων ὄρχους ἢ ἀν' ἄλσεα δένδρεων
ἢ ποίην χιλῷ εὐαλδέϊ χλωρὰ θέουσαν
δμωὴν κυανέου Ἄϊδος πήξειε μάκελλαν,
σῆμα νέον τεύχων ἠὲ πρότερον κεραΐζων.
οὐ θέμις ἀμφὶ νέκυσσι βαλεῖν ἰρύχθοια βῶλον,
πλὴν ὅ κεν αἵματος ᾖσι, καὶ ἔκγονος ἐσσαμένοιο,
(κείνοις δ' οὐκ ἀθέμιστον) ἐπεὶ τιμάορος ἵστωρ.
MARCELLUS, *Anth.* IX. 41.

(5) ἣν ὅτε σὺν Λαπίθῃσι καὶ ἀλκίμῳ Ἡρακλῆϊ
Κενταύρους διφυεῖς ὤλεσα μαρνάμενος·
ἣν ὅτε μουνογένεια κόρη θάνεν ἐν τρισὶ πληγαῖς
ἡμετέραις, Κρονίδην δ' ἤκαχον εἰνάλιον·
νῦν δέ με Μοῦσα τρίτη πυρίναις Νύμφαισι μιγέντα
δέρκεται ὑελίνῳ κείμενον ἐν δαπέδῳ. *Anthol.* XI. 88.

Explain this.

FRIDAY, *January* 18, 1884. 9 to 12.

(*For Candidates for the Chancellor's Medals only.*)

I. WRITE an ENGLISH ESSAY on *one* of the following subjects:

1. Slavery ancient and modern compared as to their effects on the free and slave population.

2. The life and character of Tiberius.

3. The effect on English Education of the establishment of a Modern Languages Tripos.

(*For Candidates for the University Scholarships only.*)

II. For original LATIN VERSE:

"Prisca gens mortalium."

or

Aegyptus.

or

"Flumen Visurgis Romanos Cheruscosque interfluebat. Eius in ripa cum ceteris primoribus Arminius adstitit, quaesitoque an Caesar uenisset, postquam adesse responsum est, ut liceret cum fratre colloqui orauit. Erat is in exercitu, cognomento Flauus, insignis fide et amisso per uolnus oculo paucis ante annis, duce Tiberio."

TACITUS, *Ann.* II. 9.

FRIDAY, *January* 18, 1884. 1 to 4.

I FOR LATIN PROSE:

The Mind's *Sense* [inward Sentiments, *φρονήματα*] may have Malignity in it; as well as Words and Actions. What any one *means*, is rather his Action, than what he *does*; for in what he means, he hath absolute power; it is wholly his *own*; in what a man doth, he may be liable to engagements and Force. Therefore we say, the *Mind* of a good man is the *Best* part of him; and the *Mind* of a bad man is the *Worst* part of him: because the one hath more good in his heart, than he can perform; the other more evil in his heart, than he can execute.

WHICHCOTE, *Aphorism* 251.

II The worst thing of all is a new church. I love to say my prayers in a place where my fathers and forefathers have prayed. It may be idleness and vanity to think so, but somehow God seems to be nearer in a building where he has long been more immediately present. There is an odour of sanctity breathing about an old church: the worn stones are hallowed by the feet which have trod and the knees which have knelt on them: so much in it has been changed by Time, that it is become more like a house not made with hands: no body now living can make anything like it; its architect is forgotten; it is the work not of a man, but of an age. A new church on the contrary was built by such a man, fitted up by such another: everything about it is so neat and so modern; it is almost as smart as a theatre: there was no such thing five years ago, and what has been so short-lived can never seem to have any permanent reason for its existence, or indeed to have anything permanent about it; and instead of the odour of sanctity, one finds only the smell of paint. It has no atmosphere of prayer: it is not a treasure-house of the dead. My feelings on this subject I should have conceived would have been almost universal, had not an American gentleman once expressed to me his surprise that we let our churches in England, especially the cathedrals, grow so old and dirty. He had seen the minsters of York and Lincoln, and assured me that, if they stood in America, the outside of them would be whitewashed every ten years; such being the American way of shewing their reverence for the house of God. How far his statement is correct, I know not. A nation of yesterday may perhaps be destitute of sympathy with the day before: but we in England, I trust, should as soon think of white-washing Helvellyn.

Then there are new books: people are for ever asking you to recommend them some new publication. I would sooner ask a man to recommend me some new wine. If wine improves by keeping, much more do books. A work composed two or three and twenty centuries since, carries me before a different scene of human life; and even if its worth were not greater, its value would be: for it teaches me something which I knew not: whereas most modern works tell you very little, but what from your own experience you know much better already: that is to say, the works of poetry and philosophy, which are conversant with the substance and spirit of things, and which are scarcely, if at all, progressive.

JULIUS HARE, *Guesses at Truth* (1827) II 298—300.

SATURDAY, *January* 19, 1884. 9 to 10.30.

GENERAL PAPER (A). GREEK.

1. GIVE some account of the history of the Macedonian kingdom and its relations with Hellenic states from the reign of Amyntas I. until the accession of Philip.

2. Describe the circumstances under which the following battles were fought, and state the results ensuing upon each: Eurymedon, Sybota, Delion, Knidos, Pydna.

3. (*a*) 'Dicam de formis verbi *τύπτειν*, quibus vetus lingua uteretur, aliisque usu omnium cum hoc verbo coniunctis, ut *ἦα, εἶμι, ἦλθον* cum *ἔρχομαι*..... *τύπτω* duplicem habet significandi potestatem.' COBET, *variae lectiones*[2] 330.

Give the Attic and Ionic forms, or equivalent phrases, used by good writers in both senses.

(*b*) Compare the uses of verbals in *-τέος(-ον)* and of the Latin gerundive.

4. Emend:

(*a*) A fragment of the Phoenissae of Aristophanes read thus in Casaubon's Athenaeus p. 154[e], *ἐς Οἰδίπου δέτται δὲ διπτύχῳ κόρῳ Ἄρης κατέσκηψέ τε μονομάχου πάλης, ἀγῶνα νῦν ἑστᾶσιν.*

(*b*) PLUT. II 316[d]: *κατηγορεῖται δ' ἀρετὴ μὲν ὡς καλόν, ἀνωφελὲς δέ. τύχη δ' ὡς ἀβέβαιον μέν, ἀγαθόν δέ.*

5. Translate and explain:

(*a*) *ὦ Πανὸς θακήματα καὶ*
παραυλίζουσα πέτρα
μυχώδεσι μακραῖς,
ἵνα χοροὺς στείβουσι ποδοῖν Ἀγραύλου κόραι τρίγονοι
στάδια χλοερὰ πρὸ Παλλάδος ναῶν. EUR. *Ion*, 492.

(*b*) *φορήσω τὸ ξίφος τὸ λοιπὸν ἐν μύρτου κλαδὶ*
ἀγοράσω τ' ἐν τοῖς ὅπλοις ἐξῆς Ἀριστογείτονι
ὧδέ θ' ἑστήξω παρ' αὐτόν. AR. *Lys.* 632.

(*c*) *ἐν τῇ σορῷ νυνὶ λαχὸν τὸ γράμμα σου δικάζειν,*
σὺ δ' οὐ βαδίζεις; ὁ δὲ Χάρων τὸ ξύμβολον δίδωσιν. *Plut.* 277.

6. Restore and explain the following inscription:

ΑΝΔΡΑΣΜΕΜΠΟΛΙΣΗΔΕΠΟΘΕΙΚΑΙΔΗ .....
ΠΡΟΣΘΕΠΟΤΕΙΔΑΙΑΣΟΙΘΑΝΟΝΕΜΠΡ .....
ΠΑΙΔΕΣΑΘΗΝΑΙΩΝΨΥΧΑΣΔΑΝΤΙΡΡΟ .....
Η . . ΑΞΑΝΤΑΡΕΤΗΝΚΑΙΠΑΤΡ . . ΕΥΚΛ .....

SATURDAY, *January* 19, 1884. 10.30 to 12.

GENERAL PAPER (B). LATIN.

1. WHAT do we know, and from what sources, of the constitution and inner life of Carthage, and of her exploring and colonizing enterprise?

2. Estimate the influence of Stoicism in Rome at different periods; and illustrate the subject by reference to Cato, Seneca and Marcus Aurelius.

3. Translate, noting grammatical or linguistic peculiarities:

(*a*) Si servus furtum faxit noxiamve nocuit.

(*b*) Si nox furtum factum sit, si im occisit, iure caesus esto.

(*c*) Si membrum rupit, ni cum eo pacit, talio esto.

(*d*) Tempestas tam denso regem operuit nimbo ut conspectum eius contione abstulerit. (LIVY, I. 6.)

(*e*) Sic tamen haec absunt, ut quae contingere non sat
Corpore sint animo cuncta uidenda meo. (OVID.)

4. Ad mille et septingenti caesi non plus centum Romanorum sociorumque caesis. (LIVY.)

Discuss the grammar of this sentence. Would any other forms have been admissible instead of "non plus centum Romanorum"? Translate in as many ways as possible (1) A wall more than six feet high; (2) A man more than twenty years old.

5. State the formation of *expergiscor, nosco, gigno,* their roots, and chief Aryan cognates. Explain the relation between *parable* and *parole;* also that between *culina, popina, kitchen;* deriving them. Derive *locus, torus.*

6. Derive from Latin the English words *balance, cinder, comfort, essay, fairy, homage, marvel, pea, remember, scald, stranger,* with explanation of the changes.

BELL AND ABBOTT SCHOLARSHIPS.

MARCH 10, 1884. 9—12.

I. 1. POINT out the spiritual importance of the Call of Abraham; and the unique position which Abraham occupies in the religious history of the world.

2. Examine the Mosaic law on slavery.

3. What is the Jewish division of the Books of the Old Testament? Explain any apparent anomalies in the position of particular Books.

4. State the source, the original context, the application, of the quotations in the following passages:

For what saith the scripture? Abraham believed God, and it was counted unto him for righteousness.

For unto which of the angels said he at any time, Thou art my Son, this day have I begotten thee? And again, I will be to him a Father, and he shall be to me a Son?

The place of the scripture which he read was this, He was led as a sheep to the slaughter; and like a lamb dumb before his shearer, so opened he not his mouth.

As it is written, He that had gathered much had nothing over; and he that had gathered little had no lack.

II. 1. Mention the events and details which are common to the first three Evangelists and St John.

2. Quote the original of the *Lord's Prayer* as given by St Matthew, *or* of the *Nunc dimittis*.

3. Translate, with short notes:

Ὡς δὲ ἦν ἐν τοῖς Ἱεροσολύμοις ἐν τῷ πάσχα ἐν τῇ ἑορτῇ, πολλοὶ ἐπίστευσαν εἰς τὸ ὄνομα αὐτοῦ, θεωροῦντες αὐτοῦ τὰ σημεῖα ἃ ἐποίει· αὐτὸς δὲ Ἰησοῦς οὐκ ἐπίστευεν αὐτὸν αὐτοῖς διὰ τὸ αὐτὸν γινώσκειν πάντας, καὶ ὅτι οὐ χρείαν εἶχεν ἵνα τις μαρτυρήσῃ περὶ τοῦ ἀνθρώπου· αὐτὸς γὰρ ἐγίνωσκεν τί ἦν ἐν τῷ ἀνθρώπῳ.

Ἐν ᾧ καὶ ὑμεῖς, ἀκούσαντες τὸν λόγον τῆς ἀληθείας, τὸ εὐαγγέλιον τῆς σωτηρίας ὑμῶν, ἐν ᾧ καὶ πιστεύσαντες ἐσφραγίσθητε τῷ πνεύματι τῆς ἐπαγγελίας τῷ ἁγίῳ, ὅς ἐστιν ἀρραβὼν τῆς κληρονομίας ἡμῶν εἰς ἀπολύτρωσιν τῆς περιποιήσεως, εἰς ἔπαινον τῆς δόξης αὐτοῦ.

Διὸ ἀφέντες τὸν τῆς ἀρχῆς τοῦ Χριστοῦ λόγον ἐπὶ τὴν τελειότητα φερώμεθα, μὴ πάλιν θεμέλιον καταβαλλόμενοι μετανοίας ἀπὸ νεκρῶν ἔργων, καὶ πίστεως ἐπὶ θεόν, βαπτισμῶν διδαχῆς, ἐπιθέσεώς τε χειρῶν, ἀναστάσεώς τε νεκρῶν, καὶ κρίματος αἰωνίου.

4. Render into the original, with any remarks upon the version which seem to be required:

The like figure whereunto even baptism doth also now save us (not the putting away of the filth of the flesh, but the answer of a good conscience toward God,) by the resurrection of Jesus Christ.

But if our gospel be hid, it is hid to them that are lost: in whom the god of this world hath blinded the minds of them which believe not, lest the light of the glorious gospel of Christ, who is the image of God, should shine unto them.

All scripture is given by inspiration of God, and is profitable for doctrine, for reproof, for correction, for instruction in righteousness.

III. 1. State the differences between the doctrine of the Churches of England and Rome on Holy Scripture.

2. Explain the terms: Deism, Manichæism, Pantheism—Erastianism, Ultramontanism.

3. Give some account of the origin and character of the Prayer-Book Psalter.

4. Explain the following terms: *Collect, Ember days, Lent, Pentecost, Whit-Sunday.*

IV. 1. State what you know of the life and works of Origen *or* Jerome.

2. By what events was the spread of Mohammedanism in Europe finally checked?

3. Mention the Cambridge men (naming their Colleges) who were distinguished in the English Reformation.

4. Give the chief works and dates of the following: *R. Bacon, Bede, G. Herbert, J. Howe, Sir T. More, Tyndale, Whichcote.*

MONDAY, *March* 10, 1884. 1—4.

TRANSLATE, with short notes:

I. Λέγει πρὸς ταῦτα Ὀτάνης, ἐπειδὴ ὥρα σπερχόμενον Δαρεῖον· Ἐπεί τε ἡμέας συνταχύνειν ἀναγκάζεις καὶ ὑπερβάλλεσθαι οὐκ ἐᾷς, ἴθι ἐξηγέεο αὐτὸς ὅτεῳ τρόπῳ πάριμεν ἐς τὰ βασιλήϊα καὶ ἐπιχειρήσομεν αὐτοῖσι. φυλακὰς γὰρ δὴ διεστεώσας οἶδάς κου καὶ αὐτὸς, εἰ μὴ ἰδὼν, ἀλλ' ἀκούσας· τὰς τέῳ τρόπῳ περήσομεν; Ἀμείβεται Δαρεῖος τοισίδε· Ὀτάνη, ἦ πολλά ἐστι τὰ λόγῳ μὲν οὐκ οἷά τε δηλῶσαι, ἔργῳ δέ· ἄλλα δ' ἐστὶ τὰ λόγῳ μὲν οἷά τε, ἔργον δὲ οὐδὲν ἀπ' αὐτῶν λαμπρὸν γίνεται. ὑμεῖς δὲ ἴστε φυλακὰς τὰς κατεστεώσας ἐούσας οὐδὲν χαλεπὰς παρελθεῖν. τοῦτο μὲν γὰρ ἡμέων ἐόντων τοιῶνδε οὐδεὶς ὅστις οὐ παρήσει, τά μέν κου καταιδεόμενος ἡμέας, τὰ δέ κου καὶ δειμαίνων, τοῦτο δὲ ἔχω αὐτὸς σκῆψιν εὐπρεπεστάτην, τῇ πάριμεν, φὰς ἄρτι τε ἥκειν ἐκ Περσέων καὶ βούλεσθαί τι ἔπος παρὰ τοῦ πατρὸς σημῆναι τῷ βασιλέϊ. ἔνθα γάρ τι δεῖ ψεῦδος λέγεσθαι, λεγέσθω. τοῦ γὰρ αὐτοῦ γλιχόμεθα οἵ τε ψευδόμενοι καὶ οἱ τῇ ἀληθείῃ διαχρεόμενοι. οἱ μέν γε ψεύδονται τότε, ἐπεάν τι μέλλωσι τοῖσι ψεύδεσι πείσαντες κερδήσεσθαι, οἱ δ' ἀληθίζονται, ἵνα τι τῇ ἀληθείῃ ἐπισπάσωνται κέρδος καί τι μᾶλλόν σφι ἐπιτράπηται. οὕτω οὐ ταὐτὰ ἀσκέοντες τὠυτοῦ περιεχόμεθα. εἰ δὲ μηδὲν κερδήσεσθαι μέλλοιεν, ὁμοίως ἂν ὅ τε ἀληθιζόμενος ψευδὴς εἴη καὶ ὁ ψευδόμενος ἀληθής. ὃς ἂν μέν νυν τῶν πυλουρῶν ἑκὼν παρίῃ, αὐτῷ οἱ ἄμεινον ἐς χρόνον ἔσται· ὃς δ' ἂν ἀντιβαίνειν πειρᾶται, διαδεικνύσθω ἐνθαῦτα ἐὼν πολέμιος καὶ ἔπειτεν ὠσάμενοι ἔσω ἔργου ἐχώμεθα.

HERODOTUS III. 72.

II. Τῇ δ' ὑστεραίᾳ ἐκκλησίᾳ ὁ Νικίας, καίπερ τῶν Λακεδαιμονίων αὐτῶν ἠπατημένων καὶ αὐτὸς ἐξηπατημένος περὶ τοῦ μὴ αὐτοκράτορας ὁμολογῆσαι ἥκειν, ὅμως τοῖς Λακεδαιμονίοις ἔφη χρῆναι φίλους μᾶλλον γίγνεσθαι, καὶ ἐπισχόντας τὰ πρὸς Ἀργείους πέμψαι ἔτι ὡς αὐτοὺς καὶ εἰδέναι ὅ τι διανοοῦνται, λέγων ἐν μὲν τῷ σφετέρῳ καλῷ, ἐν δὲ τῷ ἐκείνων ἀπρεπεῖ τὸν πόλεμον ἀναβάλλεσθαι· σφίσι μὲν γὰρ εὖ ἑστώτων τῶν πραγμάτων ὡς ἐπὶ πλεῖστον ἄριστον εἶναι διασώσασθαι τὴν εὐπραγίαν, ἐκείνοις δὲ δυστυχοῦσιν ὅτι τάχιστα εὕρημα εἶναι διακινδυνεῦσαι. ἔπεισέ τε πέμψαι πρέσβεις, ὧν καὶ αὐτὸς ἦν, κελεύσοντας Λακεδαιμονίους, εἴ τι δίκαιον διανοοῦνται, Πάνακτόν τε ὀρθὸν ἀποδιδόναι καὶ Ἀμφίπολιν, καὶ τὴν Βοιωτῶν ξυμμαχίαν ἀνεῖναι, ἣν μὴ ἐς τὰς σπονδὰς ἐσίωσι, καθάπερ εἴρητο ἄνευ ἀλλήλων μηδενὶ ξυμβαίνειν. εἰπεῖν τε ἐκέλευον ὅτι καὶ σφεῖς, εἰ ἐβούλοντο ἀδικεῖν, ἤδη ἂν Ἀργείους ξυμμάχους ποιήσθαι, ὡς παρεῖναί γ' αὐτοὺς αὐτοῦ τούτου ἕνεκα. εἴ τέ τι ἄλλο ἐνεκάλουν, πάντα ἐπιστείλαντες ἀπέπεμψαν τοὺς περὶ τὸν Νικίαν πρέσβεις. καὶ ἀφικομένων αὐτῶν καὶ ἀπαγγειλάντων τά τε ἄλλα καὶ τέλος εἰπόντων ὅτι εἰ μὴ τὴν ξυμμαχίαν ἀνήσουσι Βοιωτοῖς μὴ ἐσιοῦσιν ἐς τὰς σπονδάς, ποιήσονται καὶ αὐτοὶ Ἀργείους καὶ τοὺς μετ' αὐτῶν ξυμμάχους, τὴν μὲν ξυμμαχίαν οἱ Λακεδαιμόνιοι Βοιωτοῖς οὐκ ἔφασαν ἀνήσειν, ἐπικρατούντων τῶν περὶ τὸν Ξενάρη τὸν ἔφορον ταῦτα γίγνεσθαι, καὶ ὅσοι ἄλλοι τῆς αὐτῆς γνώμης ἦσαν, τοὺς δὲ ὅρκους δεομένου Νικίου ἀνενεώσαντο.

THUCYDIDES V. 46.

Give a short account of the circumstances referred to.

III. ΣΩΚΡΑΤΗΣ, ΑΛΚΙΒΙΑΔΗΣ.

ΑΛ. Ἀλλ' ἴσως τοῦτό σοι οὐκ ὀρθῶς ἀπεκρινάμην, τὸ φάναι εἰδέναι αὐτὸς ἐξευρών. ΣΩ. Τὸ δὲ πῶς εἶχεν; ΑΛ. Ἔμαθον, οἶμαι, καὶ ἐγὼ ὥσπερ καὶ οἱ ἄλλοι. ΣΩ. Πάλιν εἰς τὸν αὐτὸν ἥκομεν λόγον. παρὰ τοῦ; φράζε κἀμοί. ΑΛ. Παρὰ τῶν πολλῶν. ΣΩ. Οὐκ εἰς σπουδαίους γε διδασκάλους καταφεύγεις εἰς τοὺς πολλοὺς ἀναφέρων. ΑΛ. Τί δαί; οὐχ ἱκανοὶ διδάξαι οὗτοι; ΣΩ. Οὔκουν τὰ πεττευτικά γε καὶ τὰ μή· καίτοι φαυλότερα αὐτὰ οἶμαι τῶν δικαίων εἶναι. τί δέ; σὺ οὐχ οὕτως οἴει; ΑΛ. Ναί. ΣΩ. Εἶτα τὰ μὲν φαυλότερα οὐχ οἷοί τε διδάσκειν, τὰ δὲ σπουδαιότερα; ΑΛ. Οἶμαι ἔγωγε· ἄλλα γοῦν πολλὰ οἷοί τ' εἰσὶ διδάσκειν σπουδαιότερα τοῦ πεττεύειν. ΣΩ. Ποῖα ταῦτα; ΑΛ. Οἷον καὶ τὸ ἑλληνίζειν παρὰ τούτων ἔγωγε ἔμαθον, καὶ οὐκ ἂν ἔχοιμι εἰπεῖν ἐμαυτοῦ διδάσκαλον, ἀλλ' εἰς τοὺς αὐτοὺς ἀναφέρω, οὓς σὺ φῂς οὐ σπουδαίους εἶναι διδασκάλους. ΣΩ. Ἀλλ', ὦ γενναῖε, τούτου μὲν ἀγαθοὶ διδάσκαλοι οἱ πολλοί, καὶ δικαίως ἐπαινοῖντ' ἂν αὐτῶν εἰς διδασκαλίαν. ΑΛ. Τί δή; ΣΩ. Ὅτι ἔχουσι περὶ αὐτὰ ἃ χρὴ τοὺς ἀγαθοὺς διδασκάλους ἔχειν. ΑΛ. Τί τοῦτο λέγεις; ΣΩ. Οὐκ οἶσθ' ὅτι χρὴ τοὺς μέλλοντας διδάσκειν ὁτιοῦν αὐτοὺς πρῶτον εἰδέναι; ἢ οὔ; ΑΛ. Πῶς γὰρ οὔ; ΣΩ. Οὐκοῦν τοὺς εἰδότας ὁμολογεῖν τε ἀλλήλοις καὶ μὴ διαφέρεσθαι; ΑΛ. Ναί. ΣΩ. Ἐν οἷς δ' ἂν διαφέρωνται, ταῦτα φήσεις εἰδέναι αὐτούς; ΑΛ. Οὐ δῆτα. ΣΩ. Τούτων οὖν διδάσκαλοι πῶς ἂν εἶεν; ΑΛ. Οὐδαμῶς. ΣΩ. Τί οὖν; δοκοῦσί σοι διαφέρεσθαι οἱ πολλοὶ ποῖόν ἐστι λίθος ἢ ξύλον; καὶ ἐάν τινα ἐρωτᾷς, ἆρ' οὖν τὰ αὐτὰ ὁμολογοῦσι, καὶ ἐπὶ ταὐτὰ ὁρμῶσιν, ὅταν βούλωνται λαβεῖν λίθον ἢ ξύλον; ὡσαύτως καὶ πάνθ' ὅσα τοιαῦτα· σχεδὸν γάρ τι μανθάνω τὸ ἑλληνίζειν ἐπίστασθαι ὅτι τοῦτο λέγεις· ἢ οὔ; ΑΛ. Ναί. ΣΩ. Οὐκοῦν εἰς μὲν ταῦτα, ὥσπερ εἴπομεν, ἀλλήλοις τε ὁμολογοῦσι καὶ αὐτοὶ ἑαυτοῖς ἰδίᾳ, καὶ δημοσίᾳ αἱ πόλεις πρὸς ἀλλήλας οὐκ ἀμφισβητοῦσιν [αἱ μὲν ταῦθ' αἱ δ' ἄλλα φάσκουσιν]; ΑΛ. Οὐ γάρ. ΣΩ. Εἰκότως ἂν ἄρα τούτων γε καὶ διδάσκαλοι εἶεν ἀγαθοί.

PLATO *Alcibiades* VII 110 B—111 D.

IV. Οἶμαι τοίνυν ἔγωγε κἀκεῖνο ἐνθυμεῖσθαι δεῖν, ὅτι μὴ προσδεξαμένων μὲν ὑμῶν τοὺς Μεγαλοπολίτας, ἐὰν μὲν ἀναιρεθῶσι καὶ διοικισθῶσιν, ἰσχυροῖς Λακεδαιμονίοις ἔστιν εὐθὺς εἶναι, ἐὰν δὲ σωθῶσιν ἄρα, ὡς ἤδη τι καὶ παρ' ἐλπίδας ἐξέβη, βέβαιοι σύμμαχοι Θηβαίων δικαίως ἔσονται· ἂν δὲ προσδέξησθε, τούτοις μὲν ὑπάρξει ἤδη σωθῆναι δι' ὑμᾶς, τὸ δὲ συμβησόμενον καὶ τὸν τοῦ κινδύνου λογισμὸν μετενεγκόντες σκοπῶμεν ἐπὶ Θηβαίων καὶ Λακεδαιμονίων. ἂν μὲν τοίνυν καταπολεμηθῶσιν οἱ Θηβαῖοι, ὥσπερ αὐτοὺς δεῖ, οὐκ ἔσονται μείζους τοῦ δέοντος οἱ Λακεδαιμόνιοι τούτους ἔχοντες ἀντιπάλους τοὺς Ἀρκάδας, ἐγγὺς οἰκοῦντας· ἂν δ' ἀνενέγκωσιν ἄρ' οἱ Θηβαῖοι καὶ σωθῶσιν, ἀλλ' οὖν ἀσθενέστεροί γ' ἔσονται ἡμῖν συμμάχων γεγενημένων τῶνδε καὶ δι' ἡμᾶς σεσωσμένων· ὥστε πανταχῇ συμφέρει μήτε προέσθαι τοὺς Ἀρκάδας μήτε δι' αὐτούς, ἂν ἄρα σωθῶσι, περιγεγονέναι δοκεῖν, μήτε δι' ἄλλους τινάς, ἀλλὰ δι' ὑμᾶς.

DEMOSTHENES *ὑπὲρ Μεγαλοπολιτῶν* p. 210, §§ 35, 36.

TUESDAY, *March* 11, 1884. 9—12.

For LATIN PROSE:—

1. The voice of history, which is often little more than the organ of hatred or flattery, reproaches Sapor with a proud abuse of the rights of conquest. We are told that Valerian, in chains, but invested with the imperial purple, was exposed to the multitude, a constant spectacle of fallen greatness; and that whenever the Persian monarch mounted on horseback, he placed his foot on the neck of a Roman Emperor. Notwithstanding all the remonstrances of his allies, who repeatedly advised him to remember the vicissitude of fortune, to dread the returning power of Rome, and to make his illustrious captive the pledge of peace, not the object of insult, Sapor still remained inflexible. When Valerian sank under the weight of shame and grief, his skin, stuffed with straw, and formed into the likeness of a human figure, was preserved for ages in the most celebrated temple of Persia; a more real monument of triumph than the fancied trophies of brass and marble so often erected by Roman vanity. The tale is moral and pathetic, but the truth of it may very fairly be called in question.

GIBBON, *Decline and Fall of the Roman Empire.* Chap. x.

2. Look, gentlemen, to the whole tenour of your Member's conduct. Try whether his ambition or his avarice have justled him out of the straight line of duty; or whether that grand foe of the offices of active life, that master-vice in men of business, a degenerate and inglorious sloth, has made him flag and languish in his course. This is the object of our inquiry. If our Member's conduct can bear this touch, let us mark it for sterling. He may have fallen into errors; he must have faults; but our error is greater, and our fault is radically ruinous to ourselves, if we do not bear, if we do not even applaud the whole compound and mixed mass of such a character. Not to act thus is folly; I had almost said it is impiety. He censures God who quarrels with the imperfections of man. Gentlemen, we must not feel peevish with those who serve the people. For none will serve us, while there is a court to serve, but those who are of a nice and jealous honour. Depend upon it that the lovers of freedom will be free.

BURKE, *Speech at Bristol previous to the Election,* 1780.

TUESDAY, *March* 11, 1884. 1—4.

TRANSLATE with short notes:

I. Summa in utroque est honestas, summa dignitas: quam ego, si mihi per Servium liceat, pari atque eadem in laude ponam. Sed non licet. Agitat rem militarem: insectatur totam hanc legationem: adsiduitatis et operarum harum cotidianarum putat esse consulatum. Apud exercitum mihi fueris, inquit, tot annos, forum non attigeris: afueris tam diu, et, cum longo intervallo veneris, cum iis, qui in foro habitarunt, de dignitate contendas? Primum ista nostra adsiduitas, Servi, nescis quantum interdum adferat hominibus fastidii, quantum satietatis? Mihi quidem vehementer expediit positam in oculis esse gratiam. Sed tamen ego mei satietatem magno meo labore superavi et tu item fortasse: verum tamen utrique nostrum desiderium nihil obfuisset. Sed ut hoc omisso ad studiorum atque artium contentionem revertamur, qui potest dubitari quin ad consulatum adipiscendum multo plus adferat dignitatis rei militaris quam iuris civilis gloria? Vigilas tu de nocte ut tuis consultoribus respondeas: ille ut eo, quo intendit, mature cum exercitu perveniat. Te gallorum, illum bucinarum cantus exsuscitat. Tu actionem instituis, ille aciem instruit. Tu caves ne tui consultores, ille ne urbes aut castra capiantur. Ille tenet et scit ut hostium copiae, tu ut aquae pluviae arceantur. Ille exercitatus est in propagandis finibus, tu in regendis, ac nimirum—dicendum est enim quod sentio—rei militaris virtus praestat ceteris omnibus. Haec nomen populo Romano, haec huic urbi aeternam gloriam peperit: haec orbem terrarum parere huic imperio coëgit: omnes urbanae res, omnia haec nostra praeclara studia et haec forensis laus et industria latent in tutela ac praesidio bellicae virtutis. Simul atque increpuit suspitio tumultus, artes ilico nostrae conticescunt.

CICERO, *Pro Murena* IX. 21—22.

II. Tandem eo, quod lenissimum videbatur, decursum est, ut, qui se domumque religione exsolvere vellet, cum sibimet ipse praedam aestumasset suam, decimae pretium partis in publicum deferret. Camillus identidem omnibus locis contionabundus haud mirum, ait, id quidem esse, furere civitatem, quae damnata voti omnium rerum potiorem curam quam religione se exsolvendi habeat. nihil de conlatione dicere stipis verius quam decumae, quando ea se quisque privatim obligaverit, liberatus sit populus: enimvero illud se tacere suam conscientiam non pati, quod ex ea tantum praeda, quae rerum moventium sit, decuma designetur, urbis atque agri capti, quae et ipsa voto contineatur, mentionem nullam fieri. cum ea disceptatio anceps senatui visa delegata ad pontifices esset, adhibito Camillo visum collegio, quod eius ante conceptum votum Veientium fuisset et post votum in potestatem populi Romani venisset, eius partem decumam Apollini sacram esse. ita in aestimationem urbs agerque venit. pecunia ex aerario prompta et tribunis militum consularibus, ut aurum ex ea coemerent, negotium datum.

LIVY, v. 25.

III. At Caecina, defectione classis volgata, primores centurionum et paucos militum, ceteris per militiae munia dispersis, secretum castrorum adfectans in principia vocat. ibi Vespasiani virtutem viresque partium extollit: transfugisse classem, in arto commeatum, adversas Gallias Hispaniasque, nihil in urbe fidum; atque omnia de Vitellio in deterius. mox incipientibus qui conscii aderant, ceteros re nova attonitos in verba Vespasiani adigit; simul Vitellii imagines dereptae et missi qui Antonio nuntiarent. sed ubi totis castris in fama proditio, recurrens in principia miles praescriptum Vespasiani nomen, proiectas Vitellii effigies adspexit, vastum primo silentium, mox cuncta simul erumpunt. huc cecidisse Germanici exercitus gloriam, ut sine proelio, sine vulnere vinctas manus et capta traderent arma? quas enim ex diverso legiones? nempe victas; et abesse unicum Othoniani exercitus robur, primanos quartadecumanosque, quos tamen isdem illis campis fuderint straverintque, ut tot armatorum milia, velut grex venalium, exuli Antonio donum darentur? octo nimirum legiones unius classis accessionem fore. id Basso, id Caecinae visum, postquam domos hortos opes principi abstulerint, etiam auferre militem. integros incruentosque, Flavianis quoque partibus viles, quid dicturos reposcentibus aut prospera aut adversa?

TACITUS, *Hist.* III. xiii.

IV. Ut nunc est, nulla magno opere exspectatio est. Nam et illi rumores de comitiis Transpadanorum Cumarum tenus caluerunt: Romam cum venissem, ne tenuissimam quidem auditionem de ea re accepi. Praeterea Marcellus, quod adhuc nihil rettulit de successione provinciarum Galliarum et in Kalendas Iunias, ut mihi ipse dixit, eam distulit relationem, sane quam eos sermones expressit, qui de eo tum fuerunt, cum Romae nos essemus. Tu si Pompeium, ut volebas, offendisti, qui tibi visus sit et quam orationem habuerit tecum quamque ostenderit voluntatem—solet enim aliud sentire et loqui neque tantum valere ingenio, ut non appareat quid cupiat—fac mihi perscribas. Quod ad Caesarem, crebri, et non belli de eo rumores, sed susurratores dumtaxat veniunt: alius equitem perdidisse, quod, opinor, certe fictum est: alius septimam legionem vapulasse, ipsum apud Bellovacos circumsederi interclusum ab reliquo exercitu: neque adhuc certi quidquam est neque haec incerta tamen vulgo iactantur, sed inter paucos, quos tu nosti, palam secreto narrantur: at Domitius, cum manus ad os apposuit. Te a. d. IX. Kal. Iunias subrostrani, quod illorum capiti sit, dissiparant perisse: urbe ac foro toto maximus rumor fuit te a Q. Pompeio in itinere occisum. Ego, qui scirem Q. Pompeium Baulis iam emeticam facere et usque eo, ut ego misererer eius, esurire, non sum commotus et hoc mendacio, si qua pericula tibi impenderent, ut defungeremur optavi. Plancus quidem tuus Ravennae est et magno congiario donatus a Caesare nec beatus nec bene instructus est. Tui politici libri omnibus vigent.

CIC. *Ep. ad Fam.* VIII. i.

WEDNESDAY, *March* 12, 1884. 9—12.

For GREEK IAMBICS:

Archbishop. She in the Danish rear
Stood all impatiently to view the fight,
That, like a battle raging in her breast,
Uncertain, rose and fell. When all was lost,
And Danish fugitives went trooping by,
She with a cry of rage and wild despair
Met our pursuit, and soon a random spear
Struck her to earth, but still her flame of life
Burnt lurid to its close. With face hard set,
And breast all panting, she in death's despite
Cried 'I am Queen! And though I yield to fate
I scorn the coward fear.' Her son's name then
She murmured low and died.

Brian. Then she is dead!

Archbishop. Yes, king, quite dead; no faintest ebb of life
Stirs the still heart; the stedfast gazing eyes,
Those windows of the soul, are open wide,
But look on other worlds; and all the face
Set to the conflict seems defiant still.

For GREEK PROSE:

When I speak of ability, I am obliged to distinguish. What they have done towards the support of their system bespeaks no ordinary men. In the system itself, taken as the scheme of a republic constructed for securing the prosperity and security of the citizen, and for promoting the strength and grandeur of the state, I confess myself unable to find out anything which displays, in a single instance, the work of a comprehensive and disposing mind, or even the provisions of a vulgar prudence. Their purpose everywhere seems to have been to evade and slip aside from *difficulty*. This it has been the glory of the great masters in all the arts to confront and to overcome; and when they had overcome the first difficulty, to turn it into an instrument for new conquests over new difficulties; thus to enable them to extend the empire of their science; and even to push forward beyond the reach of their original thoughts the land-marks of the human understanding itself. He that wrestles with us strengthens our nerves, and sharpens our skill. Our antagonist is our helper. This amicable conflict with difficulty obliges us to an intimate acquaintance with our object, and compels us to consider it in all its relations. It will not suffer us to be superficial. It is the want of nerves of understanding for such a task; it is the degenerate fondness for tricking short-cuts, and little fallacious facilities, that has in so many parts of the world created governments with arbitrary powers.

BURKE.

WEDNESDAY, *March* 12, 1884. 1—4.

TRANSLATE with short marginal notes:—

(1) ὣς εἰπὼν Τρώεσσιν ἐκέκλετο μακρὸν ἀΰσας
"Τρῶες καὶ Λύκιοι καὶ Δάρδανοι ἀγχιμαχηταί,
ἀνέρες ἔστε, φίλοι, μνήσασθε δὲ θούριδος ἀλκῆς,
ὄφρ' ἂν ἐγὼν Ἀχιλῆος ἀμύμονος ἔντεα δύω
καλὰ, τὰ Πατρόκλοιο βίην ἐνάριξα κατακτάς."
ὣς ἄρα φωνήσας ἀπέβη κορυθαίολος Ἕκτωρ
δηΐου ἐκ πολέμοιο· θέων δ' ἐκίχανεν ἑταίρους
ὦκα μάλ', οὔ πω τῆλε, ποσὶ κραιπνοῖσι μετασπών,
οἳ προτὶ ἄστυ φέρον κλυτὰ τεύχεα Πηλείωνος.
στὰς δ' ἀπάνευθε μάχης πολυδακρύος ἔντε' ἄμειβεν·
ἤτοι ὁ μὲν τὰ ἃ δῶκε φέρειν προτὶ Ἴλιον ἱρὴν
Τρωσὶ φιλοπτολέμοισιν, ὁ δ' ἄμβροτα τεύχεα δῦνεν
Πηλείδεω Ἀχιλῆος, ἃ οἱ θεοὶ οὐρανίωνες
πατρὶ φίλῳ ἔπορον· ὁ δ' ἄρα φ' παιδὶ ὄπασσεν
γηράς· ἀλλ' οὐχ υἱὸς ἐν ἔντεσι πατρὸς ἐγήρα.
τὸν δ' ὡς οὖν ἀπάνευθεν ἴδεν νεφεληγερέτα Ζεὺς
τεύχεσι Πηλείδαο κορυσσόμενον θείοιο,
κινήσας ῥα κάρη προτὶ ὃν μυθήσατο θυμόν
"ἆ δειλ', οὐδέ τί τοι θάνατος καταθύμιός ἐστιν,
ὃς δή τοι σχεδὸν εἶσι· σὺ δ' ἄμβροτα τεύχεα δύνεις
ἀνδρὸς ἀριστῆος, τόν τε τρομέουσι καὶ ἄλλοι.
τοῦ δὴ ἑταῖρον ἔπεφνες ἐνηέα τε κρατερόν τε,
τεύχεα δ' οὐ κατὰ κόσμον ἀπὸ κρατός τε καὶ ὤμων
εἷλες· ἀτάρ τοι νῦν γε μέγα κράτος ἐγγυαλίξω,
τῶν ποινὴν ὅ τοι οὔτι μάχης ἐκ νοστήσαντι
δέξεται Ἀνδρομάχη κλυτὰ τεύχεα Πηλείωνος."

HOMER, *Il.* XVII. 183—208.

(2) ΥΛ. οἴμοι. τὸ μὲν νοσοῦντι θυμοῦσθαι κακόν,
τὸ δ' ὧδ' ὁρᾶν φρονοῦντα τίς ποτ' ἂν φέροι;
ΗΡ. ὡς ἐργασείων οὐδὲν ὧν λέγω θροεῖς.
ΥΛ. τίς γάρ ποθ', ἥ μοι μητρὶ μὲν θανεῖν μόνη
μεταίτιος σοί τ' αὖθις ὡς ἔχεις ἔχειν,
τίς ταῦτ' ἂν, ὅστις μὴ 'ξ ἀλαστόρων νοσοῖ,
ἕλοιτο; κρεῖσσον κἀμέ γ', ὦ πάτερ, θανεῖν
ἢ τοῖσιν ἐχθίστοισι συνναίειν ὁμοῦ.
ΗΡ. ἀνὴρ ὅδ' ὡς ἔοικεν οὐ νεμεῖν ἐμοὶ
φθίνοντι μοῖραν· ἀλλά τοι θεῶν ἀρὰ
μενεῖ σ' ἀπιστήσαντα τοῖς ἐμοῖς λόγοις.
ΥΛ. οἴμοι, τάχ', ὡς ἔοικας, ὡς νοσεῖς φράσεις.
ΗΡ. σὺ γάρ μ' ἀπ' εὐνασθέντος ἐκκινεῖς κακοῦ.
ΥΛ. δείλαιος, ὡς ἐς πολλὰ τἀπορεῖν ἔχω.

ΗΡ. οὐ γὰρ δικαιοῖς τοῦ φυτεύσαντος κλύειν.
ΥΛ. ἀλλ' ἐκδιδαχθῶ δῆτα δυσσεβεῖν, πάτερ;
ΗΡ. οὐ δυσσέβεια, τοὐμὸν εἰ τέρψεις κέαρ.
ΥΛ. πράσσειν ἄνωγας οὖν με πανδίκως τάδε;
ΗΡ. ἔγωγε· τούτων μάρτυρας καλῶ θεούς.
ΥΛ. τοιγὰρ ποιήσω, κοὐκ ἀπώσομαι, τὸ σὸν
θεοῖσι δεικνὺς ἔργον. οὐ γὰρ ἄν ποτε
κακὸς φανείην σοί γε πιστεύσας, πάτερ.
ΗΡ. καλῶς τελευτᾷς, κἀπὶ τοῖσδε τὴν χάριν
ταχεῖαν, ὦ παῖ, πρόσθες· ὡς πρὶν ἐμπεσεῖν
σπαραγμὸν ἤ τιν' οἶστρον, ἐς πυράν με θῇς.
ἄγ' ἐγκονεῖτ', αἴρεσθε. παῦλά τοι κακῶν
αὕτη, τελευτὴ τοῦδε τἀνδρὸς ὑστάτη.

SOPHOCLES, *Trachiniae*, 1230—1256.

(3) οὔτινά φημι θεῶν ἄτερ ὄλβιον, οὐ βαρύποτμον
ἄνδρα γενέσθαι,
οὐδὲ τὸν αὐτὸν ἀεὶ βεβάναι δόμον
εὐτυχίᾳ· παρὰ δ' ἄλλαν ἄλλα
μοῖρα διώκει·
τὸν μὲν ἀφ' ὑψηλῶν βραχὺν ᾤκισε,
τὸν δ' ἀτίταν εὐδαίμονα τεύχει.
μόρσιμα δ' οὔτι φυγεῖν θέμις,
οὐ σοφίᾳ τις ἀπώσεται·
ἀλλὰ μάταν ὁ πρόθυμος ἀεὶ πόνον ἕξει.
ἀλλὰ σὺ μὴ προπίτνων τὰ θεῶν φέρε μηδ' ὑπεράλγει
φροντίδα λύπᾳ·
εὐδόκιμον γὰρ ἔχει θανάτου μέρος
ἁ μελέα πρό τ' ἀδελφῶν καὶ γᾶς,
οὐδ' ἀκλεής νιν
δόξα πρὸς ἀνθρώπων ὑποδέξεται·
ἁ δ' ἀρετὰ βαίνει διὰ μόχθων.
ἄξια μὲν πατρός, ἄξια δ'
εὐγενίας τάδε γίγνεται. EURIPIDES, *Herakleidae*, 608—627.

(4) φέρε νυν κατάπτω τοῖς θεατοῖς τὸν λόγον,
ὀλίγ' ἄτθ' ὑπειπὼν πρῶτον αὐτοῖσιν ταδί,
μηδὲν παρ' ἡμῶν προσδοκᾶν λίαν μέγα,
μηδ' αὖ γέλωτα Μεγαρόθεν κεκλεμμένον.
ἡμῖν γὰρ οὐκ ἔστ' οὔτε κάρυ' ἐκ φορμίδος
δούλω διαρριπτοῦντε τοῖς θεωμένοις,
οὔθ' Ἡρακλῆς τὸ δεῖπνον ἐξαπατώμενος,
οὐδ' αὖθις ἐνασελγαινόμενος Εὐριπίδης·
οὐδ' εἰ Κλέων γ' ἔλαμψε τῆς τύχης χάριν,
αὖθις τὸν αὐτὸν ἄνδρα μυττωτεύσομεν.
ἀλλ' ἔστιν ἡμῖν λογίδιον γνώμην ἔχον,
ὑμῶν μὲν αὐτῶν αὐχὶ δεξιώτερον,

κωμῳδίας δὲ φορτικῆς σοφώτερον.
ἔστιν γὰρ ἡμῖν δεσπότης ἐκεινοσὶ
ἄνω καθεύδων, ὁ μέγας, οὐπὶ τοῦ τέγους.
οὗτος φυλάττειν τὸν πατέρ' ἐπέταξε νῷν,
ἔνδον καθείρξας, ἵνα θύραζε μὴ 'ξίῃ.
νόσον γὰρ ὁ πατὴρ ἀλλόκοτον αὐτοῦ νοσεῖ,
ἣν οὐδ' ἂν εἷς γνοίη ποτ' οὐδ' ἂν ξυμβάλοι,
εἰ μὴ πύθοιθ' ἡμῶν. ἐπεὶ τοπάζετε.

ARISTOPHANES, *Vespae*, 54—73.

THURSDAY, *March* 13, 1884. 9—12.

1. TRANSLATE into LATIN HEXAMETERS:

I see thee, mighty Lord of all, revealed
In forms of infinite diversity.
I see thee like a mass of purest light,
Flashing thy lustre everywhere around.
I see thee crowned with splendour like the sun,
Pervading earth and sky, immeasurable,
Boundless, without beginning, middle, end,
Preserver of imperishable law,
The everlasting Man; the triple world
Is awe-struck at this vision of thy form,
Stupendous, indescribable in glory.
Have mercy, God of gods; the universe
Is fitly dazzled by thy majesty,
Fitly to thee alone devotes its homage.
At thy approach the evil demons flee,
Scattered in terror to the winds of heaven.
The multitude of holy saints adore thee—
Thee, first Creator, lord of all the gods,
The ancient One, supreme Receptacle
Of all that is and is not, knowing all,
And to be known by all.

Bhagavad-gītā, xi. (Monier Williams).

2. For LATIN ELEGIACS:

Semen est sanguis Christianorum.

TERTULLIAN.

THURSDAY, *March* 13, 1884. 1—4.

TRANSLATE with short notes:

1. nil adeo fieri celeri ratione videtur,
quam sibi mens fieri proponit et inchoat ipsa:
ocius ergo animus quam res se perciet ulla,
ante oculos quorum in promptu natura videtur:
at quod mobile tanto operest, constare rutundis
perquam seminibus debet perquamque minutis,
momine uti parvo possint impulsa moveri.
namque movetur aqua et tantillo momine flutat,
quippe volubilibus parvisque creata figuris,
at contra mellis constantior est natura
et pigri latices magis et cunctantior actus;
haeret enim inter se magis omnis materiai
copia, nimirum quia non tam levibus extat
corporibus neque tam suptilibus atque rutundis.
namque papaveris aura potest suspensa levisque
cogere ut ab summo tibi diffluat altus acervus,
at contra lapidum conlectum ipse euru' movere
noenu potest. igitur parvissima corpora proquam
et levissima sunt, ita mobilitate fruuntur:
at contra quae cumque magis cum pondere magno
asperaque inveniuntur, eo stabilita magis sunt.
nunc igitur quoniam est animi natura reperta
mobilis egregie, perquam constare necessest
corporibus parvis et levibus atque rutundis.

LUCRETIUS III. 182—205.

2. vix ea legati, variusque per ora cucurrit
Ausonidum turbata fremor: ceu saxa morantur
cum rapidos amnis, fit clauso gurgite murmur
vicinaeque fremunt ripae crepitantibus undis.
ut primum placati animi et trepida ora quierunt,
praefatus divos solio rex infit ab alto:
'ante equidem summa de re statuisse, Latini,
et vellem et fuerat melius, non tempore tali
cogere concilium, cum muros adsidet hostis.
bellum importunum, cives, cum gente deorum
invictisque viris gerimus, quos nulla fatigant
proelia; nec victi possunt absistere ferro.
spem siquam ascitis Aetolum habuistis in armis,
ponite: spes sibi quisque. sed haec quam angusta videtis;
cetera qua rerum iaceant perculsa ruina,
ante oculos interque manus sunt omnia vestras.
nec quemquam incuso: potuit quae plurima virtus
esse, fuit; toto certatum est corpore regni.
nunc adeo quae sit dubiae sententia menti

expediam et paucis animos adhibete docebo.
est anticus ager Tusco mihi proximus amni,
longus in occasum, finis super usque Sicanos:
Aurunci Rutulique serunt et vomere duros
exercent colles atque horum asperrima pascunt.
haec omnis regio et celsi plaga pinea montis
cedat amicitiae Teucrorum, et foederis aequas
dicamus leges sociosque in regna vocemus.
considant, si tantus amor, et moenia condant.'

VIRGIL, *Æn.* XI. 296—323.

3. non dices hodie quorsum haec tam putida tendant,
furcifer? Ad te, inquam. Quo pacto, pessime? Laudas
fortunam et mores antiquae plebis, et idem,
siquis ad illa deus subito te agat, usque recuses,
aut quia non sentis, quod clamas, rectius esse,
aut quia non firmus rectum defendis, et haeres
nequiquam caeno cupiens evellere plantam.
Romae rus optas; absentem rusticus urbem
tollis ad astra levis. si nusquam es forte vocatus
ad cenam, laudas securum olus ac, velut usquam
vinctus eas, ita te felicem dicis amasque,
quod nusquam tibi sit potandum. iusserit ad se
Maecenas serum sub lumina prima venire
convivam: nemon oleum fert ocius? ecquis
audit? cum magno blateras clamore fugisque.
Mulvius et scurrae tibi non referenda precati
discedunt. Etenim fateor me, dixerit ille,
duci ventre levem, nasum nidore supinor,
imbecillus, iners, siquid vis, adde, popino.
tu cum sis quod ego et fortassis nequior, ultro
insectere velut melior, verbisque decoris
obvolvas vitium? Quid, si me stultior ipso
quingentis empto drachmis deprenderis? aufer
me vultu terrere; manum stomachumque teneto,
dum, quae Crispini docuit me ianitor, edo.

HORACE, *Satires* II. 7, 21—45.

illa manus quondam studiorum fida meorum
  et felix domino notaque Caesaribus,
destituit primos viridis Demetrius annos:
  quarta tribus lustris addita messis erat.
ne tamen ad Stygias famulus descenderet umbras,
  ureret implicitum cum scelerata lues,
cavimus et domini ius omne remisimus aegro:
  munere dignus erat convaluisse meo.
sensit deficiens sua praemia meque patronum
  dixit ad infernas liber iturus aquas.

MARTIAL, I. 101.

FRIDAY, *March* 14, 1884. 9—12.

1. IF one side of a triangle be produced, the exterior angle is greater than either of the interior opposite angles.

2. Write a short essay on Euclid's twelfth axiom, and the principles which may be substituted for it.

3. Find the locus of a point such that the sum of the two triangles formed by joining it with the extremities of two given finite right lines shall be given.

In what sense, or with what modification of the enunciation, will the whole of the locus found apply to the problem?

4. Define compound ratio; and prove that equiangular parallelograms have to each other the ratio which is compounded of the ratio of their sides.

5. If two planes intersect, not at right angles, and from a point in one two perpendiculars be drawn, one to the line of intersection, and the other to the second plane, the line of intersection of the planes will be perpendicular to the plane containing the two perpendiculars.

6. Show how to find the greatest common measure of two integers, pointing out methods by which the process may in particular cases be shortened.

7. If a number be divisible by each of two others which are prime to each other, it will be divisible by their product.

Hence show that the product of n consecutive integers is divisible by 1, 2, 3...n.

8. Show that the weight of a substance in pounds may be ascertained by means of weights, to be put into one scale only, of 1, 2, 2^2, ...2^n lbs. up to $2^{n+1}-1$ pounds; but that if it be allowable to put the weights some in one scale and some in the other, then with the same number of weights, of 1, 3, 3^2, 3^3...3^n lbs. respectively, the weight of a substance may be found up to $\frac{1}{2}(3^{n+1}-1)$ pounds.

9. Show that the simultaneous equations

$$x+y=a$$
$$x^n+y^n=b$$

may be solved by quadratics if n be any integer between 1 and 6.

10. At what part of a table of common logarithms will the increment of the logarithm, regarded as integral, be the same as the increment of the number, regarded as having ciphers added to make the number of figures the same as in the mantissa?

11. Apply the binomial theorem to find $\sqrt{98}$ to 5 places of decimals.

12. Sum the series

(1) $1^2+2^2+3^2+\ldots$ to n terms,

(2) $\frac{1}{1\cdot 8}+\frac{1}{2\cdot 9}+\frac{1}{3\cdot 10}+\ldots$ to n terms and to infinity,

(3) $1-\frac{2^2}{3}+\frac{3^2}{3^2}-\frac{4^2}{3^3}+\frac{5^2}{3^4}-\ldots$ to n terms and to infinity.

FRIDAY, *March* 14, 1884. 1—4.

1. FIND the solutions, in positive integers, of the equation

$$7x + 13y = 88.$$

2. If the angles of a regular pentagon be joined in all ways, find numerically the ratios in which any one of the diagonals is divided by two of the others.

3. If $\cosh x = \frac{1}{2}(e^x + e^{-x})$, $\sinh x = \frac{1}{2}(e^x - e^{-x})$, $\tanh x = \sinh x \div \cosh x$,

find the relations between $\cosh x$ and $\sinh x$, and between $\cosh x$ and $\tanh x$.

4. A person on a known hill measures the altitude, and roughly the azimuth, of a balloon, and simultaneously notes the place of its shadow on the plain below, and the time. The position of the shadow and the height of the mountain being supposed known by reference to a map, and the position of the sun from the time, required to find the elevation of the balloon.

What is the use of roughly observing the azimuth?

5. Prove Sturm's theorem; and apply it to determine the nature of the roots of the equation

$$x^3 + qx + r = 0.$$

6. Among parallelograms circumscribing an ellipse, those which have their sides parallel to pairs of conjugate diameters are equal to one another, and less than all others.

7. If a chord of one branch of a hyperbola be produced to meet the conjugate hyperbola, the two portions comprised each between the primitive hyperbola and its conjugate are equal to each other.

8. Find the equation of the surface which touches a system of planes each of which cuts three rectangular axes so that the sum of the squares of the intercepts is constant.

9. Find the greatest paraboloid of revolution which can be inscribed in a right cone on a circular base, the axes of revolution of the two being coincident, and the vertices turned the same way.

10. A heavy flexible and inextensible chain forming a loop rests like a necklace on a smooth vertical cone of revolution; find the tension of the chain.

11. An imperfectly elastic ball is dropped from a known height on a plane, so as repeatedly to rebound. From observing the time from when the ball was let drop to when the motion ceases, determine the coefficient of elasticity.

12. A person standing on a bridge over a chasm lets fall a stone, and notes the time from when he let go to when he hears the impact; find the depth of the chasm, supposing the velocity of sound known, but neglecting the resistance of the air.

INDIAN LANGUAGES TRIPOS.

SATURDAY, *February* 9, 1884. 1—4.

TRANSLATE into ENGLISH, adding short notes where necessary:

I.

خوشا دلي که مدام از پي نظر نرود بهر درش که بخوانند بيخبر نرود
طمع دران لب شيرين نکردنم اوليست ولي چگونه مگس ازپي شکر نرود
تو کز مکارم اخلاق عالم دگري وفاي عهد من از خاطرت بدر نرود
سواد ديدهٔ غم‌ديده ام به اشک مشوي که نقش خال تو ام هرگز از نظر نرود
سياه‌نامه‌تر از خود کسي نمي بينم چگونه چون قلمم دود دل بسر نرود
دلا مباش چنين هرزه‌گرد وهرجائي که هيچ کار زپيشت بدين هنر نرود
بتاج هدهدم از ره مبر که باز سفيد زکبر در پي هر صيد مختصر نرود
زمن چو باد صبا بوي خود دريغ مدار چراکه بي سر زلف تو ام بسر نرود
بپوش دامن عفوي بزلت من مست که آبروي شريعت بدين قدر نرود
بيار باده و اول بدست حافظ ده بشرط آنکه زمجلس سخن بدر نرود

Háfiz.

II.

از خود اي جزو زکلها مختلط فهم ميکن حالتِ هر منبسط
چون نصيب مهتران دردست و رنج کهترانرا کي تواند بود گنج
چونکه کلّيات را رنج ست و درد جزو ايشان چون نباشد روي زرد
خاصه جزوي کو ز اضدادست جمع زاب و خاک و آتش و بادست جمع
اين عجب نبود که ميش از گرگ جست اين عجب که ميش دل درگرگ بست
زندگاني آشتئ ضدها ست مرگ آن کاندر ميان شان جنگ خاست
زندگاني آشتئ دشمنان مرگ وارفتن باصل خويش دان

صلح دشمن‌وار باشد عاریت دل بسوي جنگ دارد عاقبت
روزکي چند از براي مصلحت باهمند اندر وفا و مرحمت
عاقبت هر یک بجوهر باز گشت هر یکي با جنس خود انباز گشت
لطفِ باري این پلنگ و رنگ را الف داد و برد زایشان جنگ را
لطفِ حق این شیر را و گور را الف دادست این دو ضد دور را
چون جهان رنجور زندانی بود چه عجب رنجور اگر فاني بود

Masnaví.

III.

آبادانيِ گجرات را در عهد چنگیز خان چنان نشان میدادند که در عصر پادشاهان سابق معمور بود و رواج اهل علم و فضل چنان شده که فوق آن متصور نباشد و هر سپاهي و مسافري و غریبي که رفته اورا دید یا ملازمت اختیار کرد دیگر اورا بهیچ چیز و هیچ کس احتیاج نماند و میگویند که هر روز پنج شش سروپاي خاصهٔ خود بمردم میبخشید و هیچ سروپا کم از هفتاد و هشتاد تا پنجاه اشرفي نمي بود و یکي از حاتمي‌هاي او این بود که روزي با ملازمانش سیر میکرد و عبد الله خان اوزبک در ملازمتش بود درین اثنا دو سه کشتي پر از اسباب و اقمشه و جواهر نفیس به *نظر او گذرانیدند به مجرد دیدن همه‌را به عبد الله خان اوزبک برگذار کرد و از آنجمله این که شاه عارف صفوي حسیني که حالا در لاهور ست و بعنوان کرامت تسخیر جن مشهور و گنجها داشته بمردم میبخشد میگویند که این همه خزائن و دفائن از چنگیز خان یافته و مهرهاي او همه بسکهٔ چنگیز است و الله اعلم

Muntakhab ut-Tawáríkh.

* Explain the various reading بنذر او.

IV.

چون معلوم شد که تحقق خلافت که غایت ایجاد انسانست بعلم و عمل منوط و مربوطست پس علمي که کافل تحقیق کیفیت و رسوم طریق تحصیل این سعادت عظمي باشد اهمّ علوم و انفع آن تواند بود و آن حکمت علمیست که حکما آنرا طبِّ روحاني خوانده اند چه بمعرفت آن حفظ اعتدال خلقي بر نفس کامله توان نمود که بمنزلهٔ حفظ الصحت است بدن را و بهمان رو نفوس ناقصه باعتدال توان کرد که

بمثابهٔ دفع مرض است ابدان را چه ملکات ردیه امراض نفساني اند و تفصیل کلام درین مقام آنست که شرف هر علمي یا به نباهت موضوع آنست یا بجلالت غایت و منفعت یا بوثاقت برهان و حجت و این علم از جهات ثلاثه بمزید اختصاص مخصوص ست

Akhláq-i Jalálí.

V.

از آثار سعادت و نجابت آنحضرت آنکه باوجود عنفوان جواني و توافق اسباب عیش و کامراني و علائق سلطنت و جهانباني نه چون سرخوشان شراب غرور اوقات فراغت باستیفاي لذات جسماني و استنماي قواي غضبي و شهواني گذراند بلکه معظم اوقات همایون ساعات را بعد از فراغ از اداي فرائض ملت و قیام به مصالح مملکت و حوائج رعیت و اقامت مراسم نصفت و عدالت مصروف کتب حقائق علمي و نوادر حکمي و نصائح و امثال ارباب علم و کمال و حکایات سلاطین عدل آیین و اساطین ائمهٔ دین میفرماید

Akhláq-i Jalálí.

MONDAY, *February* 11, 1884. 9—12.

TRANSLATE into PERSIAN PROSE:

King Edwin called an assembly of his counsellors and asked each to state his sentiments on the new religion proclaimed by Paulinus. The first who ventured to speak was Coiffi the high priest, who, instead of opposing, advised the adoption of the foreign worship. No one, he said, had served the gods more assiduously than himself, and yet few had been less fortunate. He was weary of deities who were so indifferent or ungrateful, and he would willingly try his fortune under the new religion. Then one of the old thanes rose and said, "Often, O king, in the depth of winter, while you are feasting with your thanes, and the fire is blazing on the hearth in the midst of the hall and the storm is loud outside, you have seen a bird enter at one door and fly through the house and escape at the other door. While it is within, it is not touched by the winter's storm; but it is but for a moment; for from winter it comes and to winter it returns. Such to me appears the life of man. He walks the earth for a few years; but what precedes his birth or what follows after his death, we know not. If this new lore can bring anything more certain, it is fit that we should follow it."

MONDAY, *February* 11, 1884. 1—4.

TRANSLATE into ENGLISH, adding short notes where necessary:

I.

الحق کشمیر دم از بهشت میزند همیشه پادشاهان هندوستان که از اولاد تیمور کورکان بودند از جهان آباد خصوصا اکبر شاه در فصل بهار بسیر کشمیر مي آمدند چرا که هوایش مشک فشان وصفایش چو فردوس جنان میماند در یک طرف شهر دل یعني مانند کول آب شیرین واقع شده مسافتش از طوبخانه تا اسکدار اطرافش باغ و معموریست وکنجیني ها یعني رقاصان دخترهاي ماه پیکر خورشید منظر رقص وبازي میکنند در لب دل قلعهٔ کوهست در بالاي کوه اکبر شاه قلعه ساخته نامش ناک نکرست عقل در تعمیر وبنایش حیران میماند در بالاي در قلعه نوشته اند که بعضي ویران شده وبعضي خوانده میشود چند بیت که خواندم این بود

(نظم) بناي قلعه ناکر نکر شد بحکم پادشاه داد کستر
کرور ده لک از مخزن فرستاد دو صد استاد هندي جمله چاکر
نکرده هیچ کس بیکار آنجا تمامي یافتند از مخزنش زر
سر شاهان عالم شاه اکبر تعالي شانه الله اکبر

یازده ملیون پول هندوستان خرج شده بدون خرج ومواجب دو صد نفر استاد سنک تراش وغیره که آنها علوفه خوار بودند بحساب اسلامبول بیست وپنج ملیون میشود که پنجاه هزار کیسه بوده باشد

Mír 'Abd ul Kerím Bukhárí.

II.

باید برویم بقصر ویندزور که مقر اعلحضرت ویقتوریا پادشاه انکلیس است با کالسکهٔ بخار یکساعت مسافت است خلاصه رخت پوشیده با صدر اعظم ولرد مورلي سوار کالسکه شده رفتیم جمعیت زیاده از حد سر راه وطرفین راه ایستاده بودند انقدر کالسکه بود که حساب نداشت از خیابان هاید پارک وشهر کذشته رسیدیم بکار سوار کالسکه بخار شدیم کالسکهاي بسیار اعلي وطرفین کالسکه یک پارچه از بلور بود از جاهاي اباد وصحرا وچمن کذشتیم تا قصر ویندزور از دور پیدا شد مثل قلعه چهار برجي بنظر میامد نزدیک رسیده پیاده شده سوار کالسکهٔ أسبي شدیم جمیع ملتزمین ما هم بودند پاي پله قصر پیاده شدیم اعلحضرت پادشاه تا پاي پله استقبال کردند پائین امده دست ایشانرا کرفته بازو داده رفتیم بالا از اطاقها ودالانهاي قشنک که پردهاي اشکال خود داشت کذشته داخل اطاق مخصوص شده روي سندلي نشستیم پادشاه اولاد ومتعلقان وخدام خودشانرا معرفي کردند ما هم شاهزادها وصدر اعظم وغیرهرا معرفي کردیم لرد شامبرلاند که وزیر دربار پادشاهي است نشان ژارتیر مکلل بالماسرا که به زانوبند معروف واز نشانهاي بسیار معتبر انکلیس است براي ما اورد پادشاه برخاسته بدست خودشان نشانرا بجا زدند وحمایلش را انداختند جوراب بند بلندرا هم دادند داستان این نشان از قراریست که در ذیل نوشته میشود

Roznáma-e safar-i Firangistán.

III.

چنین آمد از هوشیاران روم — که زاهد زني بود در شهر روم
بآبستني روز بیچاره گشت — زشهر وز شوي خود آواره گشت
چو تنک آمدش وقت بار افکني — برو سخت شد درد آبستني
بویرانهٔ بار بنهاد ومرد — غم طفل میخورد وجان میسپرد

که تا خود که پرورد خواهد ترا — کدامین دده خورد خواهد ترا
ازینش خبر نه که پرورد گار — چگونه ورا پرورد وقت کار
چه گنجینها زیر بارش کشد — چه اقبالها در کنارش کشد
چو زن مرد آن طفل بیکس نماند — کس بیکسانش بجائي رساند
که ملک جهانرا بفرهنگ وراي — شد از قاف تا قاف کشورکشاي
ملک فیلقوس از تماشاي دشت — شکار افکنان سوي آن زن گذشت
زني دید مرده بدان رهگذر — بپائین او طفلي آورده سر
زبي شیري انگشت خود میمزید — بمادر بر انکشت خود میگزید
بفرمود تا چاگران تاختند — زکار زن مرده پرداختند
زخاک ره آن طفل را برگرفت — فرو ماند ازان روي نیکو شگفت
ببرد وبپرورد وبنواختش — پس از خود ولي عهد خود ساختش

Sikander-náma.

IV.

غمین شد دل هر دو از یک دگر — گرفتند هر دو دوال کمر
تهمتن اگر دست بردي بسنگ — بکندي سیه سنگ را روز جنگ
کمربند سهراب را چاره کرد — که از زین بجنباند اندر نبرد
میان جوان را نبد آگهي — بماند از هنر دست رستم تهي
فرو داشت دست از کمربند اوي — شگفتي فرو ماند از بند اوي
دو شیر اوژن از جنگ سیر آمدند — تبه گشته و خسته دیر آمدند
دگر باره سهراب گرز گران — ززین بر کشید و بیفشرد ران
بزد گرز وآورد کتفش بدرد — بپیچید و درد از دلیري بخورد
بخندید سهراب و گفت اي سوار — بزخم دلیران نه پایدار
بزیر اندرت رخش گوئي خر ست — دو دست سوار از همه بدتر ست
مرا رحمت آید بتو بر زدل — که از خونت آغشته گشت است گل
اگرچه گوي سرو بالا بود — جواني کند پیر کانا بود

Sháhnáma.

TUESDAY, *February* 12, 1884. 9—12.

GRAMMAR OF PERSIAN AND ARABIC.

1. EXPLAIN the significance of *hamza* in such words as فائدہ—مؤمن. What are the conventional uses of *hamza* in Persian?

2. Translate the following from the *Qawa'id-i-Farsi*:—

جمهور كي نزديک فعل مضارع ماضي سي بنا كرتا هي اور علامت اوسكي يهه هي
كه اوسكي آخر دال ساكن آتي هي اور فعل بناني كا كوئي قاعدہ كليه نهين هي اور
امتحان اور تلاش سي معلوم هوا كه جو صيغه ماضي هوتا هي اوسكي حرف آخر كي
ماقبل ان گيارہ حرفون مين سي كوئي حرف هوگا الف ١ خا ٢ را ٣ زا ٤ سين ٥ شين ٦ فا ٧ ميم ٨
نون ٩ واو ١٠ يا ١١ كه جنكي مجموعه سي يهه فقرہ شرف آموزي سخن بنجاتا هي اور از
روي قياس كي فعل مضارع ماضي مطلق سي چار طرح پر بنا كرتا هي اولاً تبديل
حرف سي خواہ ايک حرف كي ساتهه يا دو حرف كي ساتهه دوم بحذف حرف سوم
بزيادتي حرف چهارم تبديل كرني حركات اور سكنات سي

Form the aorists from the preterites given below, and show how each illustrates one or other of the four modes of derivation laid down in the above.

افتاد سوخت كرد زد گريست شد پذيررفت آمد افگند بود گزيد

3. Name the tenses employed in the following lines from *Umar Khayyam*, and translate:

دي كوزہگري بديدم اندر بازار * بر تازہ گلي لگد همي‌زد بسيار
و ان گل بزبان حال با او مي گفت * من همچو تو بودہ ام مرا نيكو دار

4. Translate into Hindustani the following sentence from *Sa'di.*

اگر این دانا بودي کار او بنادان بدین جا نرسیدي

What name is given by native grammarians to the tense used?

5. Write out the following sentence, with the vowels etc. supplied: and translate it.

موسي علیه السلام قارون را نصیحت کرد که احسن کما احسن الله الیک نشنید
و عاقبتش شنیدي که چه دید

6. What are the usual forms of broken plural used for verbal agents, intensive agents, and nouns of place in Arabic? Give examples.

Explain the meaning of كُلُّ جَمْعٍ مُؤَنَّثٌ.

7. Explain the following technical terms:—and give examples of the verbal noun (infinitive) for the Forms quoted below each of them.

لفیف	ناقص	اجوف	مثال	مضاعف	مهموز
I	VIII X	VI VII	V	IV	II III

8. Reckon according to *abjad* the dates indicated by فوت اکبر شه—وفات فیروز.

TUESDAY, *February* 12, 1884. 1—4.

TRANSLATE into ENGLISH, adding short notes where necessary.

I.

یون سنا هي که ایک مرد مّلتاني بازار سي بکري خرید کي اّس کي رسّي هاتهہ مین پکڑي هوئي اپني گهر لیئي آتا تها جب نزدیک گاون کي پهنچا - کئي ایک رِند ایک جگهہ کهڑي تهي آپس مین صلاح کي که اِس آدمي سي کسي چهل بل سي بکري اڑایا چاهیئي - سب ني ایک دل اور ایک زبان هوکر بندش باندهي اور تین چار جگهہ جدا جدا راه مین بیٹهي - اّنهہ مین سي پهلي ایک ني اّس سي ملاقات کي اور کهـا که اي بهائي یهہ نجس کتّا تو ني کهـان پایا - اّني جواب دیا که یهہ کتّا هي که بکري مین اسي بازار سي مول لیئي آتا هون لیکن دل مین کچهہ شک پڑا - منهہ پهیرکر بکري کي طرف دیکها - معلوم کیا که بکري هي تب کاندهي پر رکهہ لیچلا - تهوڑي دور بڑها تها که دوسري سي ملاقات هوئي - وه بولا اي ملتاني اس کو کاندهي پر رکهہ کر لیجاتا هي اگر یهہ موتي تو کپڑي تیري ناپاک هونگي - ملتاني اپني دل مین سوچا که آگي ایک کتّا کهہ چکا هي - دوسرا بهي ناپاک کهتا هي - کاندهي سي اتارکر پهر ڈریا لیا - تهوڑي دور آگي چلا تها که ایک بوڑها درخت کي نیچي سي بول اٹها که اي مرد تو دیوانه هي که آنکهون کي جوت هي گهٹ گئي هي که کتّا سا ناپاک جانور هاتهہ مین پکڑي لیئي جاتا هي یي سب باتین سنکر تب تو یقین هوا که شاید کچهہ عقل مین یا بینائي مین خلل هوا هي که کتّي کو بکري جانکر مول لیجاتا هون - کچهہ اندیشه نه کیا بکري کي رسّي هاتهہ سي چهوڑ دي اور اپ کپڑون سمیت ندّي مین جا کود پڑا - نها دهو گهر کي راه پکڑي اور بکري انهہ رندون ني لیجاکر شوق سي چٹ کي *

Akhlák-i Hindí.

II.

کشمیر ایک ملک دلکشا اور باغ پر فضا هي موسم مین وهان بهار رهتي هي اور هوا باغ رضوان کیسي بهتي هي پاني وهان کا خوشگوار هر گلزار مین جاري انهار و ابشار گل رنگ برنگ کي هزارها خصوصًا گلاب و بنفشه و نرگس خودرو صحرا صحرا - غرض اس ملک کي طرفه بهار و عجائب خزان هي في الحقیقت وه سرزمین باغ بوستان و لائق دوستان هي سواي شاه آلو وشهتوت میوي بهت هوتي هین خربوزه تربوز سیب شفتالو زردالو نهایت عزیز و لطیف - انگور اگرچه کثرت سي هوتا هي لیکن اکثر بي مزه وکثیف - باوجود که شهتوت کي درختون کي بهتایت هي پر ثمر انکا کم کهاتي هین مگر انکي پتّي ریشم کي کیڑون کو کهلاتي هین - خورش وهان کي باشندون کي مچهلي خشکه بلکه باسي بیشتر اور ساگ پات اقسام کي چنانچه اسکو سکها بهي رکهتي هین - هرچند که وهان کي بهتایت هي پر اچها کم هوتا هي گیهون بهي نپٹ چهوٹا سیاه تسپر قلیل اور مونگ وهانکي باشندي کم کهاتي هین جَو تو نظر هِي نهین آتي زمین وهان کي سیلابي اور مرطوب جوتني کي لیي نهایت خوب - باوجود خلقت کي بهتایت کي اور وجه معیشت کي قلت کي چوري اور گدائي وهان نهین ساکن وهان کي بیشتر کثیف الاوقات چنانچه ایک جامه شالي همیشه پهني رهتي هین لیکن قابل دینداري ودنیاداري مین کامل - یه غلط هي که سب کي سب نیک ظاهر وبد باطن هوتي هین مگر اچهي کم اور بري بهت - پر اونٹهه اور هاتهي وهان نهین هوتا هان ٹانگن کثرت سي اور نهایت زور اور چالاک رهوار گریوه گذار *

Árâish-i mahfil.

III.

هي اشتهار تجهسي مرا اي فلك جناب رخشندگئ ذره هي از فيض آفتاب
اک تخم هون مين خاک نشين زمين شور نشو و نما دي مجکو کرم کا تري سحاب
هي يه جهان مين وه در دولت ترا که يهان ناکام بخت آنکي هوتا هي کامياب
قطره تجهه ابر فيض سي پهنچي جو سوي بحر جاوي رگڑتي چرخ کو موج در خوش آب
دريا کو سير کشتي سي تيري هو يه شرف لاوي عجب نهين جو هما بيضهٔ حباب
روشن دلونکو گر نهو مسجود در ترا رکهي نشان سجده جبين پر نه ماهتاب
معراج وه نبي کي جو هي عرش کي پري معراج امّت آسمين جو اس جا هو باريابِ
يه عدل هي ترا که قوي کو ضعيف پر کرني سي اب تعدي کي اتنا هي اجتناب
کنجشک کي چلي نه وه تير آشيان تلک پرگيري مين لگائ جسکي پر عقاب
پهنچا نه تيري عهد مبارک مين ايک روز از دست محتسب کوئي تا پاي احتساب
سامان تيره روزي هي بهر سر عدو تيري وه تيغ قبضه هي جسکا سياه تاب
کيا تاب هي عدو کي جو ٹهري تري حضور سنکر نهيب قهر کو تيري گه عتاب
هر پرت پرت کوه کا يون اوڑ چلي که جون کهل جاي باد تند سي شيرازهٔ کتاب

Intikhâb-i Kulliyât Saudâ.

WEDNESDAY, *February* 13, 1884. 9—12.

TRANSLATE into HINDUSTANI (native character):

I.

The native officials are a most useful set of men, a great deal too much decried by persons who do not understand them. I am at this moment speaking not so much of their honesty, as of their efficiency; and I am sure that the latter quality cannot be questioned. The world does not produce better men of business than some of the heads of offices—men whose quickness, memory, method, skill, and knowledge of official detail are quite surprising; and whose fluency of pen and language cannot be surpassed.

DOWSON.

II.

The immediate cause of insurrection, however, is said to have been as follows. An Afghan chief complained against an English officer to the latter's superior, who paid no attention to the complaint and ungraciously dismissed the complainant. He was not the only Afghan thus treated. The Afghan chief brought this to the notice of Shah Shuja', who could not help uttering in open court the words "*az shuma hech nah mi ayad.*" The Afghans were ready to explode into rebellion, and these words fell upon them like a spark upon powder. Next morning the Kabulis raised an insurrection. The shops were closed, and a mob of two or three hundred men rushed into the house of Sir Alexander Burnes, which was situated in the heart of the city, and murdered the gentlemen and ladies and their Hindu servants, and having pillaged all the houses of the Residency set them on fire. It might have been expected that when the news reached the cantonments the troops would have been instantly set in motion, and have marched into the city; but the officers wasted their time in sending here and there, and concerting fruitless measures. Had they thrown themselves into the Bala Hisar, where Shah Shuja' resided and which was adjacent to the city, it is certain they would never have been dispossessed of the Fort.

History of Hindustan.

WEDNESDAY, *February* 13, 1884. 1—4.

TRANSLATE into ENGLISH, adding short notes where necessary.

I.

ایک دن کوئي کتاب فروش کتابین بیچني لایا تها بڑي بهائي جان ني فسانه عجائب قصه گل بکاولي آرایش محفل مثنوي میر حسن مضحکات نعمتخان عالي منتخب غزلیات چرکین هزلیات جعفر زٹلي قصائد هجویه مزرا رفیع السودا دیوان جان صاحب بهاردانش با تصویر اندر سبها دریاي لطافت میر انشاء الله خان کلیات رند وغیره بهت سي کتابین اوس سي لي تهین مین بهي بیٹها هوا تها مجهکو دیکهکر بولي کیون تم بهي کوئي کتاب لوگي - مین - جو آپ تجویز فرمائین - بهائي جان - کونسي کتاب تمکو لي دون یهه کتابین جو مین ني لي هین اول تو میري شوق کي هین دوسري تمکو انکا مزا نهین ملیگا - کتاب والي کي ساري گٹهري مین سي یهه واسوخت اور دیوان نظیر اکبرآبادي دو کتابین انهون ني میري لئي نکالین اور کها که واسوخت تو خیر مگر یهه دیوان بڑي عمده کتاب هي میان هدهد کي اشعار آجتک کسي ني جمع نهین کئي تهي اسکي حاشیي پر وه بهي هین چونکه بهائي جان ني دیوان کي بهت تعریف کي تهي مین ني اوسکو نهایت شوق سي کهولا تو پهلي هي چوهون کا اچار نکلا اوسکي مضمون سي میري طبیعت کچهه ایسي کهٹي هوئي که مین ني دونون کتابین پهر دین مگر بهائي جان ني یهه واسوخت زبردستي میري سر مڑهي

Nazīr Ahmad.

II.

اوسني کہا ميري حاضر هونيکا سبب تمهاري حضور مين صرف ملاقات هي که مدت سي تمهين نهين ديکها تها اور سوا اسکي ايک مطلب اور هي اگر آپ بدل متوجه هوکي اوسي سنين تو مين عرض کرون پهر اوسني صندوقچه جواهر کو اپني خدمتگار کي هاتهه سي ليکر گذرانا که اپ کي عنايت سي مترصد هون که اس هديهٔ دوستانه کو قبول فرمايي بادشاه ني بپاس خاطر اوسکي اوسي قبول کيا پهر اوسني بعد تمهيد شائسته کي شاهد مطلب کو منصّه اظهار پر اسطرح جلوهگر فرمايا که مين باعتماد آپ کي لطف و عنايت اور بسبب يکجهتي و اتحاد که همیشه سي درميان ان دونون رياستون کي مربوط هي بي تکلف اپنا گهر سمجهه کر يهان واسطي اظهار اس مطلب کي آيا هون آپکي ضمير منير پر که آئينه جهان‌نما هي مخفي نهوگا که هماري همشيره ايک بڑي بادشاه ولايت ايران کي ساتهه که سلاطين عظيم الشان بسيط ارض سي هي منصوب هوئي تهي اوسکي بطن سي ايک فرزند اوس فرمانروا کي گهر پيدا هوا اور ازبسکه حسين اور صاحب جمال هي وه اپنا مثال اور نظير اس عالم مين نهين رکهتا اور زيور علم و دانشوري سي بهي ايسا آراسته هي که حکماي عصر کو اوسکي آگي کچهه رتبه نهين اوسکي باپ ني سن چهارده سالگي مين اوسي اپنا وليعهد کيا اور زِمام انتظام ملک کي اوسکي هاتهه مين سونپي چنانچه بعد رحلت اپني باپ کي وه شهزاده فرمانروا اوس ملک کا هي اب جو وه خدا کي فضل و کرم سي قابل شادي کي هوا اس لئي آپ کي خدمت مين ملتمس هين که اوس بادشاه عاليجاه کو اپني فرزندي مين ليکر شهزادي جواهر کي ساتهه که آپ کي دختر نيک اختر هي کتخدا فرمائيي که هر آينه ظهور اس امر کا موجب ازدياد محبت ان دونون سلطنت کا هوگا

Alf Laila.

III.

زکواۃ کا ٹال دینا تو کچھہ بڑي بات نتھي نصاب پر حول کامل کیون گزرني دین
که زکواۃ دیني پڑي جب دیکھا که برس پورا هوني آیا بي‌بي کا نام زباني هبه کردیا —
کھي کہان گیا کھچڑي مین — جب بي‌بي پر وجود زکواۃ کا وقت آیا پھر اپنا نام هبه
کرالیا اور ٹھٹھیرا بدلائي کرکي حکم خدا کو بالا بتایا یا مال کو ایسي پیرایه مین
رکھا که زکواۃ سي بري رهي خاصي طرح دوکانین مول لین مکان بنوائي اون مین
کرایه‌دار بسائي که مال نامي آپ نامي زکواۃ ندارد

Nazir Ahmad.

IV.

ایام هین جواني کي جب تک بہار هي — پیري جو آئي پھر تو خزان اشکار هي
غفلت نہین هي خوب غنیمت یه وقت جان — سن گوشي جان سي پند اگر هوشیار هي
موئ سفید لاویگا پیغام اجل کا جب — تب کچھہ نه هوسکیگا ابھي اختیار هي
گر هي تمیز فرق سفید وسیه مین کر — ایکسان نه یار گردشي لیل و نہار هي
تحصیل کرکي علم کي اچھي عمل تو کر — عالم مین آدمي کا اسي وقار هي
چاهي اگر عزیز هو پیدا کمال کر — اور بي کمال چشمي خلائق مین خوار هي
نامرد کیني کي جو زبان کرتي هین دراز — تہمت انهون کي تیغ و قلم کا شعار هي
کرتي هین نیکنامي کو دم سي حسد کي قتل — هر ایک ان مین گھاتي هي اور نا بکار هي
نوشیروان و حاتم اور رستم سي اب هي کون — نامي نکو انهون کا سدا یادگار هي
عدل و سخاوت اور شجاعت کر اختیار — ایک ایک کي جہان مین بنا پایدار هي
مکوي جمال اوسکا هي جسکو نہین زوال — دل حسني عارضي په تیرا بیقرار هي
پیکر مي غرور کا نه بدمست هوجیو — جز درد سر نه اور کچھہ اسکا خمار هي
جسکو جوان کسي سي کدورت نہین هي کچھہ — دل اسکا آئني کي نمط بي غبار هي

Jawan.

THURSDAY, *February* 14, 1884. 1—4.

1. GIVE a short sketch of the life of the poet *Jami*, and mention the names and subjects of his principal poems.

2. Give an account of *Hafiz* and his compositions: also, of the poet mentioned in the following lines:

همچو عطار از گلستان نِشاپورم ولي * خار صحراي نِشاپورم من و عطار گل

which translate.

3. Give an account of *Amir Khusrau*. Why are his later writings peculiarly interesting to the Hindustani scholar?

Translate the following, and explain the point of the last three words:

رفتم بتماشاي كنار جوي * ديدم بلب آب زن هندوي

گفتم صنما بهاي زلفت چه بود * فرياد براورد كه در در موي

4. Define the terms:

بيت مصراع قطعه قصيده مثنوي مرثيه غزل

5. Scan the following lines from the Gulistan, and name the metre in each case:

(1) جهان اي برادر نماند بكس * دل اندر جهان آفرين بند وبس

(2) دوست آن دانم كه گيرد دست دوست * در پريشان حالي و در ماندگي

6. Translate and explain the following proverbial expressions:

(1) ٹوپي والي ايک هين

(2) مسلماني مين كيا آناكاني

(3) يهان الٹي گنگا بهتي هي

(4) اونگهتي كو ٹهيلتي كا بهانه

(5) شيخي اور تين كاني

(6) قاضي جي تم كيون دبلي شهر كي انديشي سي

(7) حاتم كي گور پر لات ماري

Also give the Hindustani equivalents for the following:

(1) Birds of a feather flock together.
(2) Vox populi vox Dei.
(3) Every dog is a lion in his own lane.
(4) Great cry, little wool.

7. Name and describe the characteristics of the principal Hindustani newspapers.

LIGHTFOOT SCHOLARSHIPS.

April 29, 1884. 9 A.M.—12 M.

I.

[Candidates are requested not to answer more than eight questions.]

1. WHAT were the principal causes which led to the struggle between the Church and the Empire in the first three centuries? Give the substance of the Edicts of Diocletian, Galerius and Constantine relating to Christianity.

2. State clearly the points at issue between Arius and his opponents, and describe the part taken in the Arian controversy by Eusebius of Cæsarea, Eusebius of Nicomedia, and Liberius of Rome.

3. Give an account of the attempted revival of paganism under the Emperor Julian, and of the means adopted for its suppression under Theodosius I., Gratian, and Justinian I.

4. Of what nature do you consider the influence of Ambrose and Augustine to have been on the Church?

5. State the opinions of Eutyches, and describe the controversy to which they led.

6. Describe the position and power of the Roman See in the time of Innocent I.

7. Describe the Council in Trullo, the causes which led to it, and the principal points for which it legislated.

8. Describe the work of Gregory the Great, both in relation to the Church and to general politics.

9. Give some account of the principal barbaric Codes, pointing out how far they were influenced (1) by Roman Law, (2) by the Church.

10. Give some account of the work of Archbishop Theodore and of Benedict Biscop in England.

11. Describe the circumstances, political and ecclesiastical, which were favourable to the spread of Mohammedanism in the seventh and eighth centuries. How far do you consider that system to have been influenced by Judaism and Christianity?

12. Give some account of the relations of the bishops, and the clergy generally to the civil power in Gaul in the seventh century.

April 29, 1884. 1—4 P.M.

II.

[Candidates are requested not to answer more than *eight* questions.]

1. WHAT influences did the Church contribute towards the revival of order and civilisation under the Carlings?

2. Describe the transactions, and explain the importance, of the Council of Frankfort.

3. Describe the conversion of Bulgaria to Christianity. What is the importance of it to ecclesiastical history generally?

4. Estimate the nature and extent of the power exercised by the Church in Byzantine society in the 9th and 10th centuries.

5. State accurately the nature of the *Treuga Dei*. Within what geographical limits did it prevail, and why?

6. Estimate the nature and extent of the defects in the Gallican Church in the age before Hildebrand. How far can feudalism be held responsible for them?

7. Describe the revolution wrought by Lanfranc in the English Church.

8. Comment on the attempt made by Paschal II. to settle the Investitures dispute.

9. What was the attitude of the bishops towards the communal movement of the French towns?

10. "The clerical statesmen of the Middle Ages were usually statesmen first, and ecclesiastics only secondarily." Illustrate this from the career of Abbot Suger, *or* of Hubert Walter.

11. What was the Saladin tithe? Illustrate by examples the use subsequently made of this right of taxation.

12. Trace the stages in the establishment of the elective principle in Germany. What share had the great prelates (1) in making election effective, (2) in limiting the right to an oligarchy?

April 30, 1884. 9 A.M.—12 M.

III.

[Candidates are requested not to answer more than *eight* questions.]

1. WHAT were the real causes of the irreconcilable breach between the Eastern and Western Churches? Illustrate from the facts of one or more attempts at reunion.

2. Explain the motives which led many of the clergy to side with kings and emperors in their conflicts with the Papacy.

3. Give instances of lay criticism on the moral corruptions in the Church in the 12th, 13th and 14th centuries.

4. Describe the relations of Innocent III. with the Spanish kingdoms. What light do they throw (1) on that Pope's character, (2) on the Papal claims to temporal dominion?

5. "The Reformation movement at the beginning of the 13th century was hopeless, because premature." Discuss this.

6. Describe the relations of Venice to the Papacy, and show how they formed part of her general policy.

7. Compare the effects in France and England of the Bull *Clericis Laicos.*

8. Summarise the theory of Marsilius of Padua. How does it accord with contemporary facts?

9. To what extent was Lollardism necessarily connected with tendencies towards political and social revolution?

10. How near did the Council of Constance come to making a General Council supreme even over the Papacy, and why did it fail?

11. How far can the combined attacks on the Ottomans, after their establishment in Europe, be truly described as crusades?

12. How would you account for the grave deterioration in the character of the Popes in the latter part of the 15th century?

April 30, 1884. 1—4 P.M.

IV.

[Candidates are requested not to answer more than *eight* of these questions.]

1. WHAT do you consider to have been the influence of the Humanists, and especially of Erasmus, in promoting the Reformation?

2. Describe the constitution of the Empire, and its relations to the Papacy, at the time of the election of Charles V. as Emperor.

3. Give an account of the proceedings of the Diets held at Nürnberg from 1522—1526. What is meant by a "Recess" of a Diet?

4. Describe the "Peasants' War" and its causes. How were Luther and Melanchthon disposed towards it?

5. Point out the causes which led to the battle of Pavia and the sack of Rome. How did these events affect the policy of the Emperor?

6. By what steps was the formation of "Evangelical" states in Germany brought about? What was the origin and meaning of the word "Protestant"? Give an account of the League and the Articles of Schmalkald.

7. Give a sketch of the rise and progress of the Reformation in Switzerland up to the death of Zwingli. How did his opinions differ from Luther's?

8. Give some account of the new Orders which arose in the Roman Church in the sixteenth century.

9. What was the general policy of Pope Paul IV.? Sketch the progress of Protestantism during his reign.

10. Sketch the causes and general results of the Thirty years' war, stating the principal provisions of the Treaty of Westphalia.

11. What do you consider to have been the principal causes and results of the Troubles in England in 1640 and the following years?

12. Describe the rise and progress of Jansenism, and the part taken in the Jansenistic controversy by the French monarchy and the Papacy respectively.

May 1, 1884. 9 A.M.—12 M.

SUBJECTS FOR ESSAYS.

1. THE ideal of Hildebrand.

2. The influence of Chivalry on the moral development of Christendom.

3. The nature and the causes of Mysticism.

4. The influence of Art on the formation of theological opinion.

May 1, 1884. 1—4 P.M.

ST LOUIS.

1. GIVE a short account of the original authorities for the reign of Louis IX.

2. What were the difficulties with which Blanche of Castile had to contend as Regent, and how far was her policy successful?

3. Describe and comment on St Louis' conception of his kingly office.

4. What were the contents of the so-called Pragmatic Sanction of St Louis? On what grounds is its genuineness denied?

5. Quote from Joinville sayings and incidents illustrative of the character of St Louis.

6. Sketch the history of the crusade of St Louis. How far was its failure inevitable?

7. "Ce seroit contre Dieu et contre raison, se il contreignoit la gent à eulz absoudre, quant les clers leur feroient tort." Comment on this.

8. What was the attitude of St Louis towards the conflict between the Empire and the Papacy?

9. Mention the chief architectural monuments of the reign of St Louis, and describe shortly their characteristics.

10. What relations had St Louis with English affairs? Shew how they illustrate the strength and weakness of his character.

11. "Prohibentes insuper senescallis ne quamdiu ballivi fuerint, sibi vel suis domesticis aut propinquis matrimonia copulent, tempore suæ balliviæ, sine nostro speciali consensu, nec predictos in religionibus ponant, aut beneficia ecclesiastica vel possessiones eis acquirant." Translate this and explain its purpose. Compare with analogous regulations elsewhere.

12. Estimate the extent to which St Louis contributed towards (1) the unification of France, (2) the establishment of absolute monarchy.

May 2, 1884. 9 A.M.—12 M.

EASTERN MONACHISM.

[Candidates are requested not to answer more than *eight* questions.]

1. GIVE a short sketch of the principal developments of Asceticism among the heathen. On what principles do they appear to rest?

2. Describe Jewish Asceticism as it existed in the first century of Christianity. What opinions have been held, in ancient and modern time, with regard to the Therapeutae? Do you regard the treatise *De Vita Contemplativa* as a genuine work of Philo? Give reasons for your opinion.

3. What influence did the Alexandrian school of Theology exert on the development of Christian Asceticism? Give a sketch of the life of Hierakas.

4. What are the chief original authorities for the history of Eastern Monachism in the fourth and fifth centuries? Give an estimate of their historical value.

5. Give a sketch of the life and influence of Anthony the Hermit.

6. Give an account of the origin and organization of the monastic community at Tabennae. Quote the ancient Egyptian maxim as to the necessity of labour for monks. What kind of labour was practised in Eastern monasteries? Give the rule of Pachomius as to eating and drinking.

7. To what sources do Jerome and Cassian trace Monachism? Give an account of the ascetic practices and the monastic institutions of the former.

8. Give an account of the work of Basil the Great with reference to Monachism, specifying the leading provisions of his rule, and noting especially its differences from that of Pachomius.

9. Describe the Ἀκοίμητοι, Βοσκοί, Sarabaitae, Remoboth, Euchites and Eustathians. By what other names were any of these sects known? Give the Edicts of Valens against the monks.

10. Ἐν τούτοις τοῖς χρόνοις ἤκμασέ τε καὶ διεφάνη καὶ Συμεώνης, ὁ τῆς ὁσίου καὶ πάντα ἀοιδίμου μνήμης, πρῶτος τὴν ἐπὶ κίονος στάσιν ἐπιτηδεύσας, δίπηχυ μόλις ἐνδιαίτημα τὸ περίμετρον, Δόμνου τηνίκαδε τὴν Ἀντιοχέων ἐπισκοποῦντος· ὃς ἐπειδὴ παρ' αὐτὸν γέγονεν, ἐκπλαγεὶς τὴν στάσιν καὶ τὴν δίαιταν, τῶν μυστικωτέρων ἐγλίχετο. Ἄμφω δ' οὖν συνηλθέτην, καὶ τὸ ἄχραντον ἱερουργήσαντες σῶμα τῆς ζωοποίου κοινωνίας ἀλλήλοις μετέδωσαν. Οὗτος ἐν σαρκὶ τὴν τῶν οὐρανίων δυνάμεων πολιτείαν ζηλώσας ἐξαίρει μὲν ἑαυτὸν τῶν ἐπὶ γῆς πραγμάτων καὶ τὴν φύσιν βιασάμενος τὴν τέως κάτω βρίθουσαν τὰ μετέωρα διώκει· καὶ μέσον οὐρανοῦ καὶ τῶν ἐπὶ γῆς γενόμενος ἐντυγχάνει τῷ Θεῷ καὶ μετὰ τῶν ἀγγέλων δοξολογεῖ, ἐκ μὲν τῆς γῆς τὰς ὑπὲρ τῶν ἀνθρώπων πρεσβείας τῷ Θεῷ προσάγων, ἐξ οὐρανοῦ δὲ τοῖς ἀνθρώποις τὴν ἄνωθεν εὐμένειαν καταπραττόμενος.

EVAGRII *Hist. Eccl.* I. 13.

Translate this. Give further particulars of the life of Symeon, and mention other saints who practised the same kind of austerity.

11. Ἐν τούτῳ δὲ οὐ πολλῷ πρότερον ἀρξαμένη ζήτησις κατὰ τὴν Αἴγυπτον κεκίνητο, εἰ τὸν Θεὸν ἀνθρωπόμορφον δοξάζειν δεῖ. Ταύτης δὲ τῆς γνώμης οἱ πλείους τῶν τῇδε μοναχῶν ἦσαν, ὑπὸ ἁπλότητος ἀβασανίστως τοὺς ἱεροὺς ἐπιλαμβάνοντες λόγους, καὶ ὀφθαλμοὺς Θεοῦ καὶ πρόσωπον καὶ χεῖρας, καὶ ὅσα τοιαῦτα προσεθισθέντες ἀκούειν. Οἱ δὲ τὴν ἐν τοῖς ὀνόμασι κεκρυμμένην διάνοιαν σκοποῦντες ἐναντίως εἶχον, καὶ τοὺς τάδε λέγοντας ἄντικρυς βλασφημεῖν εἰς τὸ Θεῖον ἔλεγον, καὶ Θεόφιλος δὲ ταύτης ἔχεσθαι τῆς δόξης ἐν ἐκκλησίᾳ παρεκελεύσατο... Ἐπεὶ δὲ τοῦτο δῆλον ἐγένετο τοῖς Αἰγυπτίων μοναχοῖς, ἧκον εἰς Ἀλεξάνδρειαν, καὶ εἰς ἓν ἀθροισθέντες ἐστασίαζον καὶ ὡς ἀσεβοῦντα τὸν Θεόφιλον ἀνελεῖν ἐβουλεύοντο.

SOZOMENI *Hist. Eccl.* VIII. 11.

Translate this, explaining fully the allusions. Give other instances of the tumultuous conduct of monks in times of theological excitement.

12. What do you consider to have been, on the whole, the gain and loss to the Church of the first five centuries from the institution of hermits and monks?

TYRWHITT'S HEBREW SCHOLARSHIPS.

WEDNESDAY, *May* 14, 1884. 9—12.

1. TRANSLATE and annotate: Gen. xi. 6, 7; xxx. 38; xxxi. 7, explaining LXX. *τῶν δέκα ἀμνῶν* xxxiii. 4.

1 (*a*). Translate from *B'rē'shîth Rabbāh* (78. 12):

וירץ עשו לקראתו וישקהו. נקוד עליו אר' שמעון בן אלעזר בכ"מ שאתה מוצא הכתב רבה על הנקודה אתה דורש את הכתב הנקודה רבה על הכתב אתה דורש את הנקודה כאן לא כתב רבה על הנקודה ולא הנקודה רבה על הכתב אלא מלמד שנכמרו רחמיו באותה שעה ונשקו בכל לב. א"ל ר' יוסי אם כן למה נקוד עליו אלא מלמד שלא בא לנשקו אלא לנשכו ומשה צוארו של יעקב אבינו של שש וקהו שיניו של אותו רשע. ומה ת"ל ויבכו אלא זה בוכה על צוארו וזה בוכה על שיניו. ר' אבהו בש"ר יוחנן מייתי לה מן הכא צוארך כמגדל השן וגו'.

2. Translate and annotate Gen. xlvii. 17, discussing particularly the meanings of the verb נהל.

3. Translate and annotate 1 Kings ii. 7—9 inclus.; xx. 32, 33; 2 Kings xi. 4—8 inclus.

4. Translate and annotate Is. viii. 16—ix. 4 inclus.; xxxviii. 9—21 inclus.; lxvi. 15—18 inclus.; xl. 1, 2.

4 (*a*). Translate the following comments of R. David Qimchi:

נחמו נחמו. כל אלה הנחמות עתידה לימות המשיח והכפל לחזק. תרגם יונתן נבייא אתנביאו תנחומין על עמי אמר אלהיכון נחמו, וכן דברו כמו שפירשנו בפסוק חזקו ידיס רפות, דברו. צבאה זמנה וכן הלא נבא לאנוש עלי הארץ. ופירוש כי מלאה כי השלימה סס זמנה ר"ל זמן שהיה לה להיות בגלות. וי"ת אדי עתיד דתתמלי מעס גלותהא, תרגם נבאה כמשמעה מן לנבא. כי נרצה עונה. נשלם ענשה כמו אז תרגה הארץ את שבתותיה, וכן עונה ענשה כמו כי לא שלם עון האמורי וגו', ות"י אשתביקו לה חובאה. כי לקחה מיד ה' כפלים בכל חטאתיה. הכפל יוכל להיות פעמים שתים או יותר כמו ותכפל חרב שליפתים ר"ל שלש פעמים תכפל, ובאמרו כפלים ר"ל שתים והוא אומר על שתי גליות שגלו ישראל גלות בבל וזה הגלות, ולמה היה זה בעבור כל חטאתיה. והחכם ר' אברהם א"ע פי' כפלים מגרות שלקח כל גוי, ואחז"ל פי' כפלים עונותיהם ועונות אבותיהם כמו שאמר ירמיהו עונותיהם שבלנו וי"ת אדי קבלת כוס תנחומין מן קדם ה' כאלו לקח על חד תרין בכל חטאתהא.

5. Translate and annotate Prov. xi. 14—21 inclus.; xxvii. 16—22 inclus.

WEDNESDAY, *May* 14, 1884. 1—4.

1. POINT the following passages marking *Ethnách*, *Sillúq* and *Metheg*:

(α) בן עשרים וחמש שנה יותם במלכו ושש עשרה שנה מלך בירושלם ושם אמו ירושה בת צדוק: ויעש הישר בעיני יהוה ככל אשר עשה עזיהו אביו רק לא בא אל היכל יהוה ועוד העם משחיתים: הוא בנה את שער בית יהוה העליון ובחומת העפל בנה לרב: וערים בנה בהר יהודה ובחרשים בנה בירניות ומגדלים: והוא נלחם עם מלך בני עמון ויחזק עליהם ויתנו לו בני עמון בשנה ההיא מאה ככר כסף ועשרת אלפים כרים חטים ושעורים עשרת אלפים זאת השיבו לו בני עמון ובשנה השנית והשלשית: ויתחזק יותם כי הכין דרכיו לפני יהוה אלהיו: ויתר דברי יותם וכל מלחמתיו ודרכיו הנם כתובים על ספר מלכי ישראל ויהודה: בן עשרים וחמש שנה היה במלכו ושש עשרה שנה מלך בירושלם: וישכב יותם עם אבתיו ויקברו אתו בעיר דויד וימלך אחז בנו תחתיו:

(β) ויאמר לה מלאך יהוה שובי אל גברתך והתעני תחת ידיה: ויאמר לה מלאך יהוה הרבה ארבה את זרעך ולא יספר מרב: ויאמר לה מלאך יהוה הנך הרה וילדת בן וקראת שמו ישמעאל כי שמע יהוה אל עניך: והוא יהיה פרא אדם ידו בכל ויד כל בו ועל פני כל אחיו ישכן: ותקרא שם יהוה הדבר אליה אתה אל ראי כי אמרה הגם הלם ראיתי אחרי ראי: על כן קרא לבאר באר לחי ראי הנה בין קדש ובין ברד: ותלד הגר לאברם בן ויקרא אברם שם בנו אשר ילדה הגר ישמעאל: ואברם בן שמנים שנה ושש שנים בלדת הגר את ישמעאל לאברם:

2. Translate into pointed BIBLICAL HEBREW the following passage:

In a city of the Grecians there was a king, named Wisdom, who subdued all the regions of the west; but his happiness was incomplete because he had no son to take an active part in the government of the nation. The Almighty at length bestowed upon him a beautiful son, whom he called Heart. In process of time Heart grew in knowledge and became prime minister of State. Wisdom had a very strong fort, called Body's Castle, in which he stationed Heart as governor. Within this fort was a palace, called Palate, which like a temple was vaulted with a dome. After some time, having filled this exalted station with equity to all the world, he was one night in company with his privy councillors, who related some tales; in the course of which they stated that the Almighty has in this world an everlasting fountain from Paradise, named The Water of Life, and those who drink of it live for ever. Heart overcome with thirst for that water inquired about the fountain of life. All replied, "There is no road leading to it, nor account of anyone having been at it." The ardent desire of tasting the Water of Life brought on melancholy, and Heart resigned the affairs of the nation, shutting himself up in his closet, and locking the door of familiar conversation....

THURSDAY, *May* 15, 1884. 9—12.

TRANSLATE into BIBLICAL HEBREW:

The bird, that sits and sings upon the thorn,
Knows not its Maker's wonders, known to man:
Man moves 'mid hidden things, to Angels known,
Nor knows of aught, around, above, beneath,
Where'er he turns, beside the path of life,
Enough on earth to know.—O send Thou forth
Thy Light and Truth from Thine unseen abodes,
That they may lead me to Thy Holy Hill.
Thou that hast made the heart and seeing eye,
Give me to know Thyself, of all things else
Let me be ignorant deem'd; for Thee to know
Is to know all that's good, and fair below;—
Without Thee we are blind, but in Thee see
Thy multitude of mercy far and wide,
Thee good in all, and all things good in Thee.
Thee only none can seek and seek in vain:
Thus travelling thro' the world's lone desert way,
If, with that Ethiop stranger, o'er Thy Word
I bend, Thy Heaven-sent guide is at my side.

Add vowel points and the principal accents to the following:

(*a*) קומי אורי כי בא אורך וכבוד יהוה עליך זרח: כי הנה החשך יכסה
ארץ וערפל לאמים ועליך יזרח יהוה וכבודו עליך יראה: והלכו גוים לאורך
ומלכים לנגה זרחך: שאי סביב עיניך וראי כלם נקבצו באו לך בניך מרחוק
יבאו ובנתיך על צד תאמנה: אז תראי ונהרת ופחד ורחב לבבך כי יהפך עליך
המון ים חיל גוים יבאו לך: שפעת גמלים תכסך בכרי מדין ועיפה כלם משבא
יבאו זהב ולבונה ישאו ותהלות יהוה יבשרו: כל צאן קדר יקבצו לך אילי נביות
ישרתונך יעלו על רצון מזבחי ובית תפארתי אפאר: מי אלה כעב תעופינה וכיונים
אל ארבתיהם: כי לי איים יקוו ואניות תרשיש בראשנה להביא בניך מרחוק
כספם וזהבם אתם לשם יהוה אלהיך ולקדוש ישראל כי פארך: ובנו בני נכר
חומתיך ומלכיהם ישרתונך כי בקצפי הכיתיך וברצוני רחמתיך: ופתחו שעריך
תמיד יומם ולילה לא יסגרו להביא אליך חיל גוים ומלכיהם נהוגים: כי הגוי
והממלכה אשר לא יעבדוך יאבדו והגוים חרב יחרבו: כבוד הלבנון אליך יבוא
ברוש תדהר ותאשור יחדו לפאר מקום מקדשי ומקום רגלי אכבד: והלכו אליך
שחוח בני מעניך והשתחוו על כפות רגליך כל מנאציך וקראו לך עיר יהוה ציון
קדוש ישראל:

(b) ותהי על יפתח רוח יהוה ויעבר את הגלעד ואת מנשה ויעבר את מצפה גלעד וממצפה גלעד עבר בני עמון : וידר יפתח נדר ליהוה ויאמר אם נתון תתן את בני עמון בידי : והיה היוצא אשר יצא מדלתי ביתי לקראתי בשובי בשלום מבני עמון והיה ליהוה והעליתיהו עולה : ויעבר יפתח אל בני עמון להלחם בם ויתנם יהוה בידו : ויכם מערוער ועד בואך מנית עשרים עיר ועד אבל כרמים מכה גדולה מאד ויכנעו בני עמון מפני בני ישראל : ויבא יפתח המצפה אל ביתו והנה בתו יצאת לקראתו בתפים ובמחלות ורק היא יחידה אין לו ממנו בן או בת : ויהי כראותו אותה ויקרע את בגדיו ויאמר אהה בתי הכרע הכרעתני ואת היית בעכרי ואנכי פציתי פי אל יהוה ולא אוכל לשוב : ותאמר אליו אבי פציתה את פיך אל יהוה עשה לי כאשר יצא מפיך אחרי אשר עשה לך יהוה נקמות מאיביך מבני עמון : ותאמר אל אביה יעשה לי הדבר הזה הרפה ממני שנים חדשים ואלכה וירדתי על ההרים ואבכה על בתולי אנכי ורעותי : ויאמר לכי וישלח אותה שני חדשים ותלך היא ורעותיה ותבך על בתוליה על ההרים : ויהי מקץ שנים חדשים ותשב אל אביה ויעש לה את נדרו אשר נדר והיא לא ידעה איש ותהי חק בישראל : מימים ימימה תלכנה בנות ישראל לתנות לבת יפתח הגלעדי ארבעת ימים בשנה :

THURSDAY, *May* 15, 1884. 1—4.

TRANSLATE the following passages adding brief explanatory notes where necessary:

1. (*a*) Exodus xv. 1—8; (*b*) Leviticus xxv. 25—28.

Comment on the words זִמְרָת, אַגְּדוּ, יְכַסֻּמוּ, נָאְדָרִי, תִּרְעַץ, חִשַּׁב, עֹדֶף.

Give the chief significations of גאה and its derivatives; also the forms of רמה which are in use with their meanings.

2. (*a*) Psalm vii. 4—14; (*b*) xl. 11—16.

Illustrate the chief meanings of the roots גמל, חלץ.

Indicate the subjects of the verbs in Ps. vii. 13.

Give the forms which occur of the root of יַבֵּשׁוּ. With what other root has it forms in common? Give them.

3. (*a*) Job ix. 12—22; (*b*) xxi. 17—21.

Explain עֹזְרֵי רַהַב and the usage of the last word in various passages. Remark upon the words יַחֲלֹף, יַחְתֹּף, יִשּׁוּפֵנִי, וַיַּעְקְשֵׁנִי, גְּנָבַתּוּ, חִצָּנוּ.

Trace the connection of thought in each of the above passages.

4. (*a*) Ezek. xix. 1—6; (*b*) xxxv. 2—9.

Explain the forms שָׁמָתִרוּ, וַתַּעַל, נוֹחֲלָה, וַתֵּרָא.

In *v.* 9 of (*b*) occurs תשובנה קרי. What might be the meaning of כתיב?

5. Translate the following extracts, pointing out their connection with the biblical passages. Where they suggest a translation, indicate whether your translation is the same or not, giving reasons for any difference.

(*a*) יַמָּא וְאַרְעָא הֲווֹ מְדַיְּנִין דִּין לְקַבִּיל דִּין יַמָּא הֲוָה אֲמַר לְאַרְעָא קַבִּילִי בְּנַיְכִי וְאַרְעָא הֲוָת אָמְרָ לְיַמָּא קַבִּיל קְטִילָךְ אַרְעָא לָא הֲוָת בָּעְיָא לְמִבְלוֹעַ יַתְהוֹן וְלָא יַמָּא הֲוָת בָּעֵי לְמִטְמְעָא יַתְהוֹן וּבְמֵימַר מִן קָדָמָךְ אַרְכִּינַת יַת יְדָךְ יְמִינָךְ בִּשְׁבוּעָה וְאַשְׁבַּע לְאַרְעָא דְּלֵית אַתְּ הָבַע יַתְהוֹן מִנָּהּ לְעָלְמָא דְּאָתֵי בְּכֵן פַּתְרַת אַרְעָא יַת פּוּמָהּ וּבְלַעַת יַתְהוֹן :

תִּקְפִּי וְתוּשְׁבַּחְתִּי דְּחֵילָא יְיָ אֲמַר בְּמֵימְרֵיהּ וַהֲוָה־לִי לְפָרִיק דִּין אֱלָהִי וְאָבְנֵי־לֵיהּ מַקְדַּשׁ אֱלָהָא דַּאֲבָרְתִּי וְאָפְלַח קֳדָמוֹהִי :

(*b*) וְאַחַלְצָה צוֹרְרֵי רִיקָם : לא די שלא נטלתי שלמי רע, אבל קללתי מי שהיו צורדי ריקם. ובאנס הייתי מציל אותו, כמו שהציל שאול מיד אביסי שהיה הורג אותו לולי שמנעו שאמר: אבנו נא בחנית ובארן פעם אחת ולא אשנה לו (שמואל א כו ח); וכן כשהיה במערה נאמר: ויקצץ דוד את אנפיו בדברים ולא נתנם לקום אל שאול (שם כד ח). וא"ו ואחלצה כמו וא"ו ועבדיך באו לשבר אבל (בראשית מב י) שפרושו: לא אדני כמו שאתה אומר כי מרגלים אנחנו, אבל עבדיך באו לשבר אבל.

(*c*) וְאֵל זֹעֵם בְּכָל יוֹם : כלומר: שופט הצדיק, ושופט מי שהוא זועם אל בכל יום, כי לא יסוב מרשעו. וזהו שאמר אחריו: אם לא ישוב. אם במקום כי, כמו ואם יהיה הבל (במדבר לו ד) שהוא במקום כי, או כאשר. ובכל יום רוצה לומר: תמיד. ומה היה זעם שאול לאל? שהיה מבזה מעשה האל ודברו, כי היה יודע כי דוד על פי יי' נמשח למלך אחריו והוא היה רודף אחריו כל יום להרגו. הנה היה מוסב בכל יום לבטל דברי האל. ועוד: שהיה דוד נקי ולא חטא לו, והיה רוצה לשפוך דם נקי. ועוד: שנשבע מי יי' שלא ימיתנו; ומכל אלה היה ראוי להקרא זעם.

(*d*) ואמרת מה אמך לביא' תבא מלת מה בענין נהי כמו זה וכמו מה אמולה לבתך (יחזק' טז' ל').

FRIDAY, *May* 16, 1884. 9—12.

1. TRANSLATE into pointed BIBLICAL HEBREW:

(α) This is God's end in scourging his people; it is only to bring them to a sorrow for their offences, and an ingenuous confession of it. And if he withdraw himself, it is not to leave them for ever and look at them no more. On the contrary, it is that they may learn whether it is better to enjoy him or their sins; and that finding themselves miserable without him, they may leave those sins with which he will not dwell, and may come and entreat his return to them; which he is willing, being entreated, to grant them. And this he removes from them, that on their return to him, and their humble and earnest seeking of his return to them, they may find him, and enjoy more of his presence than before, and learn to keep it better. He throws his people into the furnace, and goes away, and leaves them there; yet it is not to let them lie still there, but he is skilful in this work, and knows the time needful for their refining, and then returns and takes them out. His purpose is to purge away the dross, but he will not lose the gold. *By this shall the iniquity of Jacob be purged, and this will serve to take away his sin.*

LEIGHTON.

(β)

Come brethren, let us go!
  The evening closeth round,
'Tis perilous to linger here
  On this wild desert ground.
Come, towards eternity
  Press on from strength to strength,
  Nor dread your journey's toils nor length,
For good its end shall be.

* * * *

Come children, let us go!
  Our Father is our guide;
And when the way grows steep and dark,
  He journeys at our side.
Our spirits He would cheer,
  The sunshine of His love
  Revives and helps us as we rove,
Ah, blest our lot e'en here!

* * * *

It will not last for long,
  A little farther roam;
It will not last much longer now
  Ere we shall reach our home;
There shall we ever rest,
  There with our Father dwell,
  With all the saints who served Him well,
There truly, deeply blest.

TERSTEEGEN.

2. Add vowel points and principal pause accents to the following passages:

(α) כי יפלא ממך דבר למשפט בין דם לדם בין דין לדין ובין נגע לנגע דברי ריבת בשעריך וקמת ועלית אל המקום אשר יבחר יהוה אלהיך בו: ובאת אל הכהנים הלוים ואל השפט אשר יהיה בימים ההם ודרשת והגידו לך את דבר המשפט: ועשית על פי הדבר אשר יגידו לך מן המקום ההוא אשר יבחר יהוה ושמרת לעשות ככל אשר יורוך: על פי התורה אשר יורוך ועל המשפט אשר יאמרו לך תעשה לא תסור מן הדבר אשר יגידו לך ימין ושמאל: והאיש אשר יעשה בזדון לבלתי שמע אל הכהן העמד לשרת שם את יהוה אלהיך או אל השפט ומת האיש ההוא ובערת הרע מישראל: וכל העם ישמעו ויראו ולא יזידון עוד:

(β) למנצח על ידיתון לאסף מזמור: קולי אל אלהים ואצעקה קולי אל אלהים והאזין אלי: ביום צרתי אדני דרשתי ידי לילה נגרה ולא תפוג מאנה הנחם נפשי: אזכרה אלהים ואהמיה אשיחה ותתעטף רוחי סלה: אחזת שמרות עיני נפעמתי ולא אדבר: חשבתי ימים מקדם שנות עולמים: אזכרה נגינתי בלילה עם לבבי אשיחה ויחפש רוחי: הלעולמים יזנח אדני ולא יסיף לרצות עוד: האפס לנצח חסדו גמר אמר לדר ודר: השכח חנות אל אם קפץ באף רחמיו סלה: ואמר חלותי היא שנות ימין עליון: אזכיר מעללי יה כי אזכרה מקדם פלאך: והגיתי בכל פעלך ובעלילותיך אשיחה: אלהים בקדש דרכך מי אל גדול כאלהים: אתה האל עשה פלא הודעת בעמים עזך: גאלת בזרוע עמך בני יעקב ויוסף סלה: ראוך מים אלהים ראוך מים יחילו אף ירגזו תהמות: זרמו מים עבות קול נתנו שחקים אף חצציך יתהלכו: קול רעמך בגלגל האירו ברקים תבל רגזה ותרעש הארץ: בים דרכך ושביליך במים רבים ועקבותיך לא נודעו: נחית כצאן עמך ביד משה ואהרן:

FRIDAY, *May* 16, 1884. 1—4.

1. TRANSLATE accurately, with short notes:

(*a*) 2 Samuel vii. 8—17.

vv. 9—11. Discuss the force of the tenses.

v. 11. Examine and illustrate the meaning of the preposition למן

vv. 15, 16. Discuss the text. The Sept. reads: *τὸ δὲ ἔλεός μου οὐκ ἀποστήσω ἀπ' αὐτοῦ καθὼς ἀπέστησα ἀφ' ὧν ἀπέστησα ἐκ προσώπου μου. καὶ πιστωθήσεται ὁ οἶκος αὐτοῦ καὶ ἡ βασιλεία αὐτοῦ ἕως αἰῶνος ἐνώπιόν μου, καὶ ὁ θρόνος αὐτοῦ ἔσται ἀνωρθωμένος εἰς τὸν αἰῶνα.*

1 Chron. xvii. 13, 14 has

וחסדי לא אסיר מעמו כאשר הסירותי מאשר היה לפניך : והעמדתיהו
בביתי ובמלכותי עד העולם וכסאו יהיה נכון עד עולם :

(*β*) Amos viii. 1—8.

v. 6. Explain the construction of נשביר.

v. 7. Investigate the meanings of the root נצח.

v. 8. Annotate כאר.

(*γ*) Psalm xlix. 1—14.

v. 3. Examine the synonyms:

בני אדם, בני איש.

v. 7. Explain the construction of הבטחים.

vv. 9, 10. Examine the force of the tenses ויקר, ויחי.

v. 12. LXX. *καὶ οἱ τάφοι αὐτῶν οἰκίαι αὐτῶν εἰς τὸν αἰῶνα.*

Targ. בבית קבורתהון ישרון לעלם

Syr. ܒܒܝܬܗܘܢ ܩܒܘܪܬܗܘܢ ܩܝܡܝܢ

Aq. *τὸ ἔντος αὐτῶν οἰκίαι αὐτῶν εἰς τὸν αἰῶνα.*

Symm. *τὰ ἔντος τῶν οἰκιῶν αὐτῶν εἰς αἰῶνα.*

Hieron. [derelinquent]...interiora sua domus suas in saeculo.

(*δ*) Zechariah x. 3—8.

Parse and comment on the forms בוסים, הבישו, הרשבותים.

Shew the force of יָגֵל *v.* 7.

Give a brief explanatory paraphrase of the passage.

2. Explain and illustrate the grammatical constructions of the following passages, translating where needful:

(*a*) 1 Sam. xix. 23.

וַתְּהִי עָלָיו גַּם הוּא רוּחַ אֱלֹהִים :

(*b*) Hos. x. 6.

גַּם אוֹתוֹ לְאַשּׁוּר יוּבָל מִנְחָה לְמֶלֶךְ יָרֵב :

(*c*) Zech. vii. 10.

וְרֵעַת אִישׁ אָחִיו אַל תַּחְשְׁבוּ בִּלְבַבְכֶם :

(*d*) Ps. xlv. 7.

כִּסְאֲךָ אֱלֹהִים לְעוֹלָם וָעֶד :

(*e*) Ps. lxxi. 7.

וְאַתָּה מַחֲסִי עֹז :

3. Translate:

ויסת : בשבעא יומין לירחא דאדר אתיליד משה רבהון דישראל ובשבעא יומין לירחא דאדר אתכניש מנו עלמא : ברת קלא נפלת מן שמיא וכן אמרת אתון כל עללי עלמא וחמון בצערי דמשה רבהון דישראל דטרח ולא אתרני ואתרבי בארבעת כלילן טבן כלילת דאוריתא דידיה דשבא יתה משמי מרומא ואתגלי עלוי איקר שכינתא דיי בתרין אלפין רבוון דמלאכין ובארבעין ותרתין אלפין ארתכין דנור כלילא דכרונתא דידיה דוות שבעתי יומי אשלמותא כלילא דמלכותא אחסינו יתיה מן שמיא לא חרבא שלף ולא סוסא אסר ולא משרין ארגיש כלילא דשמא טבא קנא בעובדין טבין ובענוותנותיה בכן אתכנש תמן משה עבדא דיי בארעא דמואב על נשיקת מימרא דיי : ת׳ י׳ דברים ל״ד

4. Translate and comment on:

(*a*) מתי יעבור הקדש. זו היא הסליחה מנעים עת תייקר התבואה וימכרו לעניים ברבית ויטלו סדותיהם . יעבור הקדש ת״י מתי תתעבר הסנה ויבא חדש העיבור ול׳ העברה הוא כמו (ירמיה מו) העביר המועד ולפי סדוחין את הקרבת העומר והסנה נמשכת והיסן מתייקר: והסנת ונפתקה בר . מתי תבוא הסמיטה ותייקר התבואה ונפתח אוצרית בר שלנו : להקטין איפה . למכור במדה קטנה ואת כספינו נקבל בשקל גדול : רס״י

(β) למה אירא רע בימי רע • עתה החל בדברי מטל ומידה • ואמר למה אירא ואדאג בימי רע שהם ימי עולם הזה • כי הם ימי רע לכל המתעסק בו • ולמה אדאג על העושר ועל הקניין שהם כבוד העולם הזה • כי אם אדאג על טובות העולם הזה עקבי יסבוני • כלומר יקרני עון בדרשי אחר טוב העולם הזה • כלומר לסוף מעשי ימצאני עון כלומר אם אשמח בו בתחילה לסוף אדאג בו • ולפי שהעקב הוא סוף כל הגוף נקרא סוף כל דבר עקב • או יהיה פירוש עקבי העולם הבא שהוא עולם השכר והעונש והשכר והעונש בסוף המעשה • רצה לומר אפילו אשמח בטובת העולם הזה כל ימי עד יום המיתה לא אשמח בעולם הבא שהוא אחר המיתה . והוא עקבי שהוא סוף המעשה . כי אין מעשה ודעת בעולם הבא . אבל הוא עולם השכר והעונש . שם יסובני עון . כלומר עונש מעשי שמחתי בטובת העולם הזה כל ימי ורדפתי אחריו • לעיכך אין ראוי לאחוז זה הדרך כמו שעושים הבוטחים על חילם • ומלת יסובני כתובה בוו עם הדגש : הבוטחים על חילם • הם בוטחים ומתהללים על רוב עשרם ואין ראוי לי לעשות כן כי לא יתהלל האדם כי אם בהשכל וידוע אל יתברך : רד"ק

SATURDAY, *May* 17, 1884. 9—12.

TRANSLATE accurately the following passages.

1. Numbers, ch. xxi. 13—20.

(*a*) Parse יאמר, v. 14; בארה and אתנה, v. 16; נשקפה, v. 20.

(*b*) Explain the Ḳĕrī perpetuum רוא, v. 16.

(*c*) Write notes on ספר מלחמת יהוה, v. 14, and מחקק, v. 18.

(*d*) At the end of v. 18 the Sept. has *καὶ ἀπὸ φρέατος εἰς Μανθαναείν*. Is this reading preferable to that of the Massoretic text? Give reasons for or against.

2. Joshua, ch. vii. 16—21.

(*a*) Parse וישכם, v. 16; הגד־נא, v. 19; and ואקחם, v. 21.

(*b*) Explain the grammatical construction of שקלים and כסף in v. 21.

(*c*) Write a note on the grammatical difficulty in האהלי, v. 21.

(*d*) V. 21, kĕthībh וארא, ḳĕrī וארא. Add the proper vowels to each of these forms. Is the Massoretic correction necessary?

(*e*) In the first half of v. 17 the Sept. has *καὶ προσήχθη κατὰ δήμους*; and in the second half some MSS. have *καὶ προσήχθη δῆμος Ζαραεὶ κατ' οἴκους*. What variations from the Massoretic text do these readings indicate? Which do you prefer? and why?

3. Jeremiah, ch. xxiii. 15—18.

(*a*) What is the peculiar force of the construction אמרים אמור, v. 17?

(*b*) In v. 17 the Sept. has λέγουσι τοῖς ἀπωθουμένοις τὸν λόγον κυρίου Εἰρήνη ἔσται ὑμῖν. How did the translators point the Hebrew text? Which reading do you prefer? and why?

(*c*) V. 18, kĕthībh דברי, ḳĕrī דברו. Add the proper vowels to each word. Is the Massoretic correction necessary?

4. Ḳoheleth, ch. ii. 1—8.

(*a*) To what period of Hebrew Literature do you assign the book of Ḳoheleth? Give your reasons.

(*b*) Point out sundry words and meanings of words in this passage which are characteristic of or peculiar to this book.

(*c*) Give the derivation of the word פרדסים, v. 5.

(*d*) Write a note on שדה ושדות, v. 8. Translate the following extract from R. David Ḳimḥī's lexicon:

ומן השרש הזה והענין הזה שדה ושדות פירוש כבודה וכבודות ויש מפרשים אותם כלי זמר ועוד מפרשים אותם נשים יפות תאר לקחות במלחמה וענינם שרודה ושרודות אבל להיותם כלי זמר הוא חנכון וכן אמרו רבותינו ז"ל מאי שדה ושדות הכא תרגימו שדה ושדתין ופירשו בו הגאונים שהוא כלי לניגון המוזיקא היה נמצא בזמן שבית המקדש קיים.

5. Ps. cx.

(*a*) For בהדרי־קדש, v. 3, Symmachus has ἐν ὄρεσιν ἁγίοις. What did he read in his Hebrew text?

(*b*) Explain the termination of דברתי, v. 4.

Add any notes which you may think necessary in defence of your translation.

6. Lamentations, ch. iv. 1—6.

(*a*) Parse יועם, v. 1; הניקו, v. 3; נשמו, v. 5; אשפתות, v. 5; דולו, v. 6.

(*b*) What is there peculiar in the words ישנא, v. 1; המסלאים, v. 2; תנין, v. 3?

SATURDAY, *May* 17, 1884. 1—4.

1. TRANSLATE Ezra, ch. iv. 17—24.

(*a*) V. 17. What is the singular of כנותהון? How would the word יָתְבִין be pointed in Syriac? What district is meant by עבר־נהרה?

(*b*) V. 18. Parse מפרש. Does the word imply that this and similar documents were translated from one language into another? Do we possess them in their original form, or not?

(*c*) V. 19. Compare the form השכחו with the corresponding Syriac word. How would the word מַלְכִין be pointed in Syriac?

(*d*) V. 20. What would be the corresponding Syriac form to מִתְיְהֵב?

(*e*) V. 21. Parse לְבַטָּלָא. What would be the corresponding form in Syriac?

(*f*) Point out and explain some words of foreign origin in these verses.

2. Translate Daniel, ch. iii. 13—18.

(*a*) Parse להויתה and היתיו, v. 13. Are such forms to be regarded as Hebraisms?

(*b*) Parse ישיזבנכון, v. 15, and לדתבותך, v. 16.

(*c*) Explain the form להוא, v. 18.

(*d*) Point out several foreign words in these verses, and state from what languages they are derived.

3. Translate as literally as possible the following passage.

ותקיף רוגזא דיהוה בשלמה ארי איתפני ליביה מרחלתא דיהוה אלהא
דישראל דאיתגלי ליה תרתין זימנין: ופקיד עלוהי על פיתגמא הדין בדיל דלא
למהך בתר טעות עממיא ולא נטר ית דפקיד יהוה: ואמר יהוה לשלמה
חלף דהות דא עימך ולא נטרתא פיקודי וקיימי דפקידית עלך אעדאה אעדי
ית מלכותא מינך ואיתנינה לעבדך: ברם ביומך לא אעבדינה בדיל דוד אבוך
מיד ברך אעדינה: לחוד ית כל מלכותא לא אעדי שיבטא חד אתן לבנך
בדיל דוד עבדי ובדיל ירושלם דאיתרעיתי:

4. Point and translate the following passages. In pointing use the Greek vowels. Add *rukkākh* and *ḳushshāi* in the first passage only.

(*a*) ܘܐܡܪ ܐܠܗܝܡ ܠܢܘܚ ܩܘܡ ܠܟ ܥܡ ܒܢܝܟ ܠܬܒܐ ܕܬܗܘܐ ܥܡܟ ܗܘ ܘܙܪܥܟ ܐܚܪܝ ܕܢܗܘܢ ܥܡ ܒܢܝ ܢܘܚ ܕܢܦܩܘ ܡܢ ܬܒܐ ܟܠ ܒܥܝܪܐ ܕܥܡܟ ܡܢ ܟܠ ܒܥܝܪܐ ܕܒܣܪ ܥܠ ܐܪܥܐ ܕܢܦܩܘܢ ܠܡܪܒܝܘܬ ܘܢܫܪܘ ܒܐܪܥܐ ܘܢܬܪܒܘ ܒܐܪܥܐ ܘܢܦܪܘܢ ܘܢܣܓܘܢ ܒܐܪܥܐ ܘܐܡܪ ܡܪܝ ܠܢܘܚ ܢܦܩ ܡܢ ܬܒܐ ܐܢܬ ܘܟܠ ܒܝܬܟ ܡܛܠ ܕܚܙܝܬܝ ܠܝ ܙܕܝܩܐ ܒܗܪܐ ܗܢܐ ܕܐܢܘܢ ܕܡܬܩܪܒܝܢ ܠܝ ܠܡܩܛܠ ܠܗ ܠܐ ܢܬܩܛܠ ܠܗ ܟܠ ܕܡܐ ܕܐܢܫܐ ܒܕܡܐ ܢܬܫܦܟ ܕܒܨܠܡܗ ܥܒܕ ܐܠܗܝܡ ܐܢܘܢ ܐܢܫܐ ܘܐܢܬ ܪܒܘ ܘܣܓܘ ܒܐܪܥܐ ÷ ܕܢܗܘܢ ܒܗ ܫܪܝܨܐ ÷

Explain the use of ܕܢܗܘܢ in the last clause.

(*b*) ܘܐܡܪ ܐܠܗܝܡ ܠܡܘܫܐ ܘܠܐܗܪܢ ܕܐܡܪܘ ܠܗܘܢ ܠܒܢܝ ܝܫܪܐܝܠ ܕܢܦܩܘ ܡܢ ܡܨܪܝܡ ܕܐܢܐ ܡܪܝܐ ܐܠܗܟܘܢ ܕܐܒܗܬܟܘܢ ܕܐܠܗܐ ܕܝܥܩܘܒ ܕܐܬܝܠܕ ܠܝ ܠܒܢܝ ܝܫܪܐܝܠ ܕܢܗܘܢ ܠܝ ܠܥܡܐ ܘܠܐ ܢܗܘܢ ܠܝ ܠܐܠܗܐ ܐܢܐ ܡܪܝܐ ܐܠܗܟܘܢ ܕܐܦܩܬܟܘܢ ܡܢ ܐܪܥܐ ܕܡܨܪܝܡ ܡܢ ܒܝܬ ܥܒܕܐ ܕܐܢܬܘܢ ܥܒܕܝܢ ܠܦܪܥܘܢ ܘܐܢܬܘܢ ܡܫܬܒܩܝܢ ÷

CLASSICAL TRIPOS.

PART I.

SATURDAY, *May* 17, 1884. 9 A.M.—12 M.

FOR LATIN PROSE:

1. No sooner had the blazing torches been applied to the gates than the silver plates heated, the wood kindled, and the whole flamed up and spread rapidly to the cloisters. Like wild beasts environed in a burning forest, the Jews saw the awful circle of fire hem them in on every side; their courage sank, they stood gasping, motionless, and helpless; not a hand endeavoured to quench the flames, or stop the silent progress of the conflagration. Yet still fierce thoughts of desperate vengeance were brooding in their hearts. Through the whole night and the next day, the fire went on consuming the whole range of cloisters. Titus at length gave orders that it should be extinguished, and the way through the gates levelled for the advance of the legionaries. A council of war was summoned, in which the expediency of destroying the magnificent building was solemnly discussed. Three of the council insisted on the necessity of destroying for ever this citadel of a mutinous people: it was no longer a temple, but a fortress, and to be treated like a military stronghold. Titus inclined to milder counsels; the magnificence of the building had made a strong impression upon his mind, and he was reluctant to destroy what might be considered one of the wonders of the Roman Empire.

MILMAN.

2. Let us consider too, how differently young and old are affected by the words of some classic author, such as Homer or Horace. Passages, which to a boy are but rhetorical common-places, neither better nor worse than a hundred others which any clever writer might supply, which he gets by heart and thinks very fine, and imitates, as he thinks, successfully, in his own flowing versification, at length come home to him, when long years have passed, and he has had experience of life, and pierce him, as if he had never before known them, with their sad earnestness and vivid exactness. Then he comes to understand how it is that lines, the birth of some chance morning or evening at an Ionian festival, or among the Sabine hills, have lasted generation after generation, for thousands of years, with a power over the mind, and a charm, which the current literature of his own day, with all its obvious advantages, is utterly unable to rival. Perhaps this is the reason of the medieval opinion about Virgil, as if a prophet or magician; his single words and phrases, his pathetic half lines, giving utterance, as the voice of Nature herself, to that pain and weariness, yet hope of better things, which is the experience of her children in every time.

NEWMAN, *Grammar of Assent.*

SATURDAY, *May* 17, 1884. 1.30—4.30.

TRANSLATE with short marginal notes where necessary:

I. hac emptione facta pecunia soluitur a Caesennia: cuius rei putat iste rationem reddi non posse, quod ipse tabulas auerterit: se autem habere argentarii tabulas, in quibus sibi expensa pecunia lata sit acceptaque relata: quasi id aliter fieri oportuerit. cum omnia ita facta essent, quem ad modum nos defendimus, Caesennia fundum possedit locauitque: neque ita multo post A. Caecinae nupsit. ut in pauca conferam, testamento facto mulier moritur: facit heredem ex deunce et semuncia Caecinam, ex duabus sextulis M. Fulcinium libertum superioris uiri, Aebutio sextulam aspergit. hanc sextulam illa mercedem isti esse uoluit adsiduitatis et molestiae, si quam ceperat. iste autem hac sextula se ansam retinere omnium controuersiarum putat. iam principio ausus est dicere non posse heredem esse Caesenniae Caecinam, quod is deteriore iure esset quam ceteri ciues propter incommodum Volaterranorum calamitatemque ciuilem. itaque homo timidus imperitusque, qui neque animi neque consili satis haberet, non putauit esse tanti hereditatem, ut de ciuitate in dubium ueniret: concessit, credo, Aebutio, quantum uellet de Caesenniae bonis ut haberet. immo, ut uiro forti ac sapienti dignum fuit, ita calumniam stultitiamque eius obtriuit ac contudit. in possessione bonorum cum esset et, cum iste sextulam suam nimium exaggeraret, nomine heredis arbitrum familiae herciscundae postulauit. atque ille eis paucis diebus, postea quam uidet nihil se ab A. Caecina posse litium terrore abradere, homini Romae in foro denuntiat fundum illum, de quo ante dixi, cuius istum emptorem demonstraui fuisse mandatu Caesenniae, suum esse seseque sibi emisse.

CICERO *pro A. Caecina* §§ 17—19.

II. A. adducis me ut tibi adsentiar. sed tua quoque uide ne desideretur constantia. M. quonam modo? A. quia legi tuum nuper quartum de finibus. in eo mihi uidebare contra Catonem disserens hoc uelle ostendere, quod mihi quidem probatur, inter Zenonem et Peripateticos nihil praeter uerborum nouitatem interesse. quod si ita est quid est causae quin, si Zenonis rationi consentaneum sit, satis magnam uim in uirtute esse ad beate uiuendum, liceat idem Peripateticis dicere? rem enim opinor spectari oportere, non uerba. M. tu quidem tabellis obsignatis agis mecum et testificaris quid dixerim aliquando aut scripserim. cum aliis isto modo, qui legibus impositis disputant: nos in diem uiuimus, quodcumque nostros animos probabilitate percussit, id dicimus, itaque soli sumus liberi. uerum tamen, quoniam de constantia paullo ante diximus, non ego hoc loco id quaerendum puto, uerumne sit quod Zenoni placuerit quodque eius auditori Aristoni, bonum esse solum quod honestum esset, sed, ni ita esset, utrum hoc totum, beate uiuere, in una uirtute poneret. qua re demus hoc sane Bruto, ut sit beatus semper sapiens: quam sibi conueniat ipse uiderit. gloria quidem huius sententiae quis est illo uiro dignior? nos tamen teneamus ut sit idem beatissimus.

CICERO *T. D.* v. §§ 32, 33.

III. equitum deinde census agi coeptus est; et ambo forte censores equum publicum habebant. cum ad tribum Polliam uentum est, in qua M. Liui nomen erat, et praeco cunctaretur citare ipsum censorem, "cita" inquit Nero "M. Liuium:" et siue ex residua uetere simultate, siue intempestiua iactatione seueritatis inflatus, M. Liuium, quia populi iudicio esset damnatus, equum uendere iussit. item M. Liuius,

cum ad tribum Arniensem et nomen collegae uentum est, uendere equum C. Claudium iussit duarum rerum causa, unius, quod falsum aduersum se testimonium dixisset, alterius, quod non sincera fide secum in gratiam redisset. aeque foedum certamen inquinandi famam alterius cum suae famae damno factum est exitu censurae. cum in leges iurasset C. Claudius et in aerarium escendisset, inter nomina eorum, quos aerarios relinquebat, dedit collegae nomen. deinde M. Liuius in aerarium uenit, et praeter Maeciam tribum, quae se neque condemnasset neque condemnatum aut consulem aut censorem fecisset, populum Romanum omnem, quattuor et triginta tribus, aerarios reliquit, quod et innocentem se condemnassent et condemnatum consulem et censorem fecissent, neque infitiari possent aut iudicio semel aut comitiis bis ab se peccatum esse. inter quattuor et triginta tribus et C. Claudium aerarium fore: quod si exemplum haberet bis eundem aerarium relinquendi, C. Claudium nominatim se inter aerarios fuisse relicturum. prauum certamen notarum inter censores: castigatio inconstantiae populi censoria et grauitate temporum illorum digna. in inuidia censores cum essent, crescendi ex eis ratus esse occasionem Cn. Baebius tribunus plebis diem ad populum utrisque dixit. ea res consensu patrum discussa est, ne postea obnoxia populari aurae censura esset. LIUIUS XXIX. 37.

IV. auxere numerum accusatorum Gellius Publicola et M. Paconius, ille quaestor Silani, hic legatus. nec dubium habebatur saeuitiae captarumque pecuniarum teneri reum: sed multa adgerebantur etiam insontibus periculosa, cum super tot senatores aduersos facundissimis totius Asiae eoque ad accusandum delectis responderet solus et orandi nescius, proprio in metu, qui exercitam quoque eloquentiam debilitat, non temperante Tiberio quin premeret uoce uoltu, eo quod ipse creberrime interrogabat, neque refellere aut eludere dabatur, ac saepe etiam confitendum erat, ne frustra quaesiuisset. seruos quoque Silani, ut tormentis interrogarentur, actor publicus mancipio acceperat. et ne quis necessariorum iuuaret periclitantem, maiestatis crimina subdebantur, uinclum et necessitas silendi. igitur petito paucorum dierum interiectu defensionem sui deseruit, ausis ad Caesarem codicillis, quibus inuidiam et preces miscuerat. TACITUS *Ann.* III. 67.

V. transeo plurimos, Lycurgum, Aristogitona et his priores Isaeum, Antiphontem; quos, ut homines, inter se genere similes differentes dixeris specie. quid ille, cuius modo fecimus mentionem, Aeschines? nonne his latior et audentior et excelsior? quid denique Demosthenes? non cunctos illos tenues et circumspectos ui, sublimitate, impetu, cultu, compositione superauit? non insurgit locis? non figuris gaudet? non translationibus nitet? non oratione ficta dat tacentibus uocem? non illud iusiurandum per caesos in Marathone ac Salamine propugnatores rei publicae satis manifesto docet, praeceptorem eius Platonem fuisse? quem ipsum num Asianum appellabimus plerumque instinctis diuino spiritu uatibus comparandum? quid Periclea? similemne credimus Lysiacae gracilitati, quem fulminibus et caelesti fragori comparant comici, dum illi conuiciantur? quid est igitur, cur in eis demum, qui tenui uenula per calculos fluunt, Atticum saporem putent? ibi demum thymum redolere dicant? quos ego existimo, si quod in his finibus uberius inuenerint solum fertilioremue segetem, negaturos Atticam esse, quod plus, quam acceperit, seminis reddat; quia hanc eius terrae fidem Menander eludit. ita nunc, si quis ad eas Demosthenis uirtutes, quas ille summus orator habuit, tamen quae defuisse ei siue ipsius natura seu lege ciuitatis uidentur, adiecerit, ut affectus concitatius moueat, audiam dicentem, "non fecit hoc Demosthenes"? et si quid exierit numeris aptius (fortasse non possit; sed tamen si quid exierit) non erit Atticum? melius de hoc nomine sentiant credantque, Attice dicere esse optime dicere. QUINTIL. XII. 10. §§ 22—26.

MONDAY, *May* 19, 1884. 9—12.

For GREEK PROSE:

1. If this counsel had been pursued steadily and resolutely, it might probably have been attended with good success. Both armies of the enemy would have been puzzled what to have done, and either of them would have been unwilling to have engaged in a siege against any place so well provided and resolved: and it would have been equally uncounsellable to have marched to any distance and have left such an enemy at their backs, that could so easily have united and incommoded any march they could have made. But it was the unhappy temper of those that were called to those counsels, that resolutions, taken upon full debate, were seldom prosecuted with equal resolution: some being in their natures irresolute and inconstant, and full of objections even after all was determined according to their own proposals; others being positive and not to be altered from what they had once declared, how unreasonably soever, or what alterations soever there were in the affairs. And the king himself frequently considered more the person who spoke, as he was in his grace or prejudice, than the counsel itself that was given: and always trusted less to his own judgement than he ought to have done; which rarely deceived him so much as that of other men.

CLARENDON, *Hist. Reb.* VIII. § 26, 27.

2. How much the being and operation of particular substances in this our globe depend on causes utterly beyond our view, is impossible for us to determine. We see and perceive some of the motions and grosser operations of things here about us; but whence the streams come that keep all these curious machines in motion and repair, how conveyed and modified, is beyond our notice and apprehension; and the great parts and wheels, as I may so say, of this stupendous structure of the universe may, for aught we know, have such a connexion and dependence in their influences and operations one upon another, that perhaps things in this our mansion would put on quite another face, and cease to be what they are, if some of the stars or great bodies incomprehensibly remote from us should cease to be or move as it does. This is certain, things, however absolute and entire they seem in themselves, are but retainers to other parts of nature for that for which they are most taken notice of by us. Their observable qualities, actions, and powers are owing to something without them; and there is not so complete and perfect a part that we know of nature which does not owe the being it has, and the excellences of it, to its neighbours.

LOCKE.

MONDAY, *May* 19, 1884. 1.30—4.30 P.M.

TRANSLATE with short marginal notes:

1. So. eri haec inmodestia me coegit, qui hoc noctis
a portu med ingratiis excitauit:
idem nonne me mittere hoc luci potuit?
opulento homini dura hoc magis seruitus est,
[hoc magis miser est diuitis seruos]
quoi noctis diesque adsiduo satis superquest:
facto aut dicto adeost opus, quietatus ne sis.
dominus diues operis te et expers laboris
quodquomque ei lubere accidit posse retur:
aequom esse id putat, non reputat quid laborist.
nec aequom anne iniquom imperet cogitabit.
ergo in seruitute expetunt multa iniqua:
habendum et ferundum hoc onust cum labore.
ME. satiust me queri illo modo seruitutem:
qui hodie fuerim liber,
eum nunc potiuit pater seruitutis:
hic qui uerna natust conqueritur.
So. sum uero uere uerbero: nam numero mi in mentem fuit,
dis aduenientem gratias pro meritis agere atque adloqui.
ne illi edepol, si merito meo referre studeant gratias,
aliquem hominem adlegent, qui mihi aduenienti os occillet probe,
quoniam bene quae in me fecerunt ingrata ea habui atque inrita.
ME. facit ille quod uolgo hau solent, ut quid se sit dignum sciat.

PLAUT. *Amph.* 163—185.

2. sic igitur tum se levis ac diffusilis aether
corpore concreto circumdatus undique flexit
et late diffusus in omnis undique partis
omnia sic auido complexu cetera saepsit.
hunc exordia sunt solis lunaeque secuta,
interutraque globi quorum uertuntur in auris;
quae neque terra sibi adsciuit nec maximus aether,
quod neque tam fuerunt grauia ut depressa sederent,
nec leuia ut possent per summas labier oras,
et tamen interutraque ita sunt ut corpora uiua
uersent et partes ut mundi totius extent;
quod genus in nobis quaedam licet in statione
membra manere, tamen cum sint ea quae moueantur.
his igitur rebus retractis terra repente,
maxuma qua nunc se ponti plaga caerula tendit,
succidit et salso suffudit gurgite fossas.
inque dies quanto circum magis aetheris aestus
et radii solis cogebant undique terram
uerberibus crebris extrema ad limina in artum,
in medio ut propulsa suo condensa coiret,
tam magis expressus salsus de corpore sudor
augebat mare manando camposque natantis,
et tanto magis illa foras elabsa volabant
corpora multa uaporis et aeris altaque caeli
densebant procul a terris fulgentia templa.

LUCR. v 467—491.

3. Aeneas primique duces et pulcher Iulus
corpora sub ramis deponunt arboris altae,
instituuntque dapes, et adorea liba per herbam
subiiciunt epulis,—sic Iuppiter ille monebat—
et Cereale solum pomis agrestibus augent.
consumptis hic forte aliis, ut uertere morsus
exiguam in Cererem penuria adegit edendi
et uiolare manu malisque audacibus orbem
fatalis crusti patulis nec parcere quadris,
heus, etiam mensas consumimus! inquit Iulus;
nec plura adludens. ea uox audita laborum
prima tulit finem, primamque loquentis ab ore
eripuit pater, ac stupefactus numine pressit.
continuo, Salue fatis mihi debita Tellus,
uosque, ait, o fidi Troiae saluete Penates;
hic domus, haec patria est. genitor mihi talia namque,
nunc repeto, Anchises fatorum arcana reliquit:
cum te, nate, fames ignota ad litora uectum
accisis coget dapibus consumere mensas,
tum sperare domos defessus ibique memento
prima locare manu molirique aggere tecta.

VERG. *Aen.* VII 107—127.

4. accipe, quae contra ualeat solacia ferre
et qui nec cynicos nec stoica dogmata legit
a cynicis tunica distantia, non Epicurum
suspicit exigui laetum plantaribus horti.
curentur dubii medicis maioribus aegri,
tu uenam uel discipulo committe Philippi.
si nullum in terris tam detestabile factum
ostendis, taceo, nec pugnis caedere pectus
te ueto nec plana faciem contundere palma,
quandoquidem accepto claudenda est ianua damno,
et maiore domus gemitu, maiore tumultu
planguntur nummi quam funera. nemo dolorem
fingit in hoc casu, uestem diducere summam
contentus, uexare oculos umore coacto:
ploratur lacrimis amissa pecunia ueris.
sed si cuncta uides simili fora plena querella,
si deciens lectis diuersa parte tabellis
uana superuacui dicunt chirographa ligni,
arguit ipsorum quos littera gemmaque princeps
sardonychum, loculis quae custoditur eburnis:
ten, o delicias! extra communia censes
ponendum, quia tu gallinae filius albae,
nos uiles pulli nati infelicibus ouis?

JUV. XIII 120—142.

5. herbarum fueras indutus, Basse, colores,
iura theatralis dum siluere loci.
quae postquam placidi censoris cura renasci
iussit et Oceanum certior audit eques,
non nisi uel cocco madida uel murice tincta
ueste nites et te sic dare uerba putas.
quadringentorum nullae sunt, Basse, lacernae,
aut meus ante omnes Cordus haberet equum.

MART. V 23.

TUESDAY, *May* 20, 1884. 9—12.

I. For GREEK IAMBICS:

Thou neither dost persuade me to seek wealth
For empire's sake, nor empire to affect
For glory's sake, by all thy argument.
For what is glory but the blaze of fame,
The people's praise, if always praise unmixt?
And what the people but a herd confused,
A miscellaneous rabble, who extol
Things vulgar, and well weigh'd, scarce worth the praise?
They praise and they admire they know not what,
And know not whom, but as one leads the other;
And what delight to be by such extoll'd,
To live upon their tongues and be their talk,
Of whom to be dispraised were no small praise?
His lot who dares be singularly good.

MILTON. *Paradise Regained* III. 44—57.

II. For GREEK ANAPAESTS:

Before our lady came on earth
Little there was of joy or mirth;
About the borders of the sea
The sea-folk wandered heavily;
About the wintry river side
The weary fishers would abide.
Alone within the weaving-room
The girls would sit before the loom,
And sing no song, and play no play;
Alone from dawn to hot mid-day,
From mid-day unto evening,
The men afield would work, nor sing,
'Mid weary thoughts of man and God,
Before thy feet the wet ways trod.

W. MORRIS. *The Hill of Venus.*

TUESDAY, *May* 20, 1884. 1.30—4.30 P.M.

TRANSLATE with short marginal notes:—

1. ἐξ Ἄργεος ἔφυγον ἐς Ἰλλυριοὺς τῶν Τημένου ἀπογόνων τρεῖς ἀδελφεοί, Γαυάνης τε καὶ Ἀέροπος καὶ Περδίκκης, ἐκ δὲ Ἰλλυριῶν ὑπερβαλόντες ἐς τὴν ἄνω Μακεδονίην ἀπίκοντο ἐς Λεβαίην πόλιν. ἐνθαῦτα δὲ ἐθήτευον ἐπὶ μισθῷ παρὰ τῷ βασιλέϊ, ὁ μὲν ἵππους νέμων, ὁ δὲ βοῦς, ὁ δὲ νεώτατος αὐτῶν Περδίκκης τὰ λεπτὰ τῶν προβάτων. ἦσαν δὲ τὸ πάλαι καὶ αἱ τυραννίδες τῶν ἀνθρώπων ἀσθενέες χρήμασι, οὐ μοῦνον ὁ δῆμος. ἡ δὲ γυνὴ τοῦ βασιλέος αὐτὴ τὰ σιτία σφι ἔπεσσε. ὅκως δὲ ὀπτῷτο ὁ ἄρτος τοῦ παιδὸς τοῦ θητὸς, τοῦ Περδίκκεω, διπλήσιος ἐγίνετο αὐτὸς ἑωυτοῦ. ἐπεὶ δὲ αἰεὶ τὠυτὸ τοῦτο ἐγίνετο, εἶπε πρὸς τὸν ἄνδρα τὸν ἑωυτῆς. τὸν δὲ ἀκούσαντα ἐσῆλθε αὐτίκα ὡς εἴη τέρας καὶ φέροι ἐς μέγα τι. καλέσας δὲ τοὺς θῆτας προηγόρευέ σφι ἀπαλλάσσεσθαι ἐκ γῆς τῆς ἑωυτοῦ. οἱ δὲ τὸν μισθὸν ἔφασαν δίκαιοι εἶναι ἀπολαβόντες, οὕτω ἐξιέναι. ἐνθαῦτα ὁ βασιλεὺς τοῦ μισθοῦ πέρι ἀκούσας, ἦν γὰρ κατὰ τὴν καπνοδόκην ἐς τὸν οἶκον ἐσέχων ὁ ἥλιος, εἶπε θεοβλαβὴς γενόμενος· μισθὸν δὲ ὑμῖν ἐγὼ ὑμέων ἄξιον τόνδε ἀποδίδωμι, δέξας τὸν ἥλιον. ὁ μὲν δὴ Γαυάνης τε καὶ ὁ Ἀέροπος, οἱ πρεσβύτεροι, ἔστασαν ἐκπεπληγμένοι, ὡς ἤκουσαν ταῦτα. ὁ δὲ παῖς, ἐτύγχανε γὰρ ἔχων μάχαιραν, εἶπας τάδε· δεκόμεθα, ὦ βασιλεῦ, τὰ διδοῖς, περιγράφει τῇ μαχαίρῃ ἐς τὸ ἔδαφος τοῦ οἴκου τὸν ἥλιον· περιγράψας δὲ, ἐς τὸν κόλπον τρὶς ἀρυσάμενος τοῦ ἡλίου, ἀπαλλάσσετο αὐτός τε καὶ οἱ μετ' ἐκείνου.

HEROD. VIII. 137.

2. καὶ χείρων οὐδενὶ ἀξιῶ δοκεῖν ὑμῶν εἶναι, εἰ τῇ ἐμαυτοῦ μετὰ τῶν πολεμιωτάτων, φιλόπολίς ποτε δοκῶν εἶναι, νῦν ἐγκρατῶς ἐπέρχομαι, οὐδὲ ὑποπτεύεσθαί μου ἐς τὴν φυγαδικὴν προθυμίαν τὸν λόγον. φυγάς τε γάρ εἰμι τῆς τῶν ἐξελασάντων πονηρίας καὶ οὐ τῆς ὑμετέρας, ἢν πείθησθέ μοι, ὠφελίας· καὶ πολεμιώτεροι οὐχ οἱ τοὺς πολεμίους που βλάψαντες ὑμεῖς ἢ οἱ τοὺς φίλους ἀναγκάσαντες πολεμίους γενέσθαι. τό τε φιλόπολι οὐκ ἐν ᾧ ἀδικοῦμαι ἔχω, ἀλλ' ἐν ᾧ ἀσφαλῶς ἐπολιτεύθην. οὐδ' ἐπὶ πατρίδα οὖσαν ἔτι ἡγοῦμαι νῦν ἰέναι, πολὺ δὲ μᾶλλον τὴν οὐκ οὖσαν ἀνακτᾶσθαι. καὶ φιλόπολις οὗτος ὀρθῶς, οὐχ ὃς ἂν τὴν ἑαυτοῦ ἀδίκως ἀπολέσας μὴ ἐπίῃ, ἀλλ' ὃς ἂν ἐκ παντὸς τρόπου διὰ τὸ ἐπιθυμεῖν πειραθῇ αὐτὴν ἀναλαβεῖν. οὕτως ἔμοιγε ἀξιῶ ὑμᾶς καὶ ἐς κίνδυνον καὶ ἐς ταλαιπωρίαν πᾶσαν ἀδεῶς χρῆσθαι, ὦ Λακεδαιμόνιοι, γνόντας τοῦτον δὴ τὸν ὑφ' ἁπάντων προβαλλόμενον λόγον, ὡς εἰ πολέμιός γε ὢν σφόδρα ἔβλαπτον, κἂν φίλος ὢν ἱκανῶς ὠφελοίην, ὅσῳ τὰ μὲν Ἀθηναίων οἶδα, τὰ δ' ὑμέτερα ᾔκαζον· καὶ αὐτοὺς νῦν νομίσαντας περὶ μεγίστων δὴ τῶν διαφερόντων βουλεύεσθαι μὴ ἀποκνεῖν τὴν ἐς τὴν Σικελίαν τε καὶ ἐς τὴν Ἀττικὴν στρατείαν, ἵνα τά τε ἐκεῖ βραχεῖ μορίῳ ξυμπαραγενόμενοι μεγάλα σώσητε καὶ Ἀθηναίων τήν τε οὖσαν καὶ τὴν μέλλουσαν δύναμιν καθέλητε, καὶ μετὰ ταῦτα αὐτοί τε ἀσφαλῶς οἰκῆτε καὶ τῆς ἁπάσης Ἑλλάδος ἑκούσης καὶ οὐ βίᾳ, κατ' εὔνοιαν δὲ, ἡγῆσθε.

THUCYD. VI. 92.

3. οὐκοῦν, ἦν δ' ἐγώ, ἡ διαλεκτικὴ μέθοδος μόνη ταύτῃ πορεύεται, τὰς ὑποθέσεις ἀναιροῦσα, ἐπ' αὐτὴν τὴν ἀρχήν, ἵνα βεβαιώσηται, καὶ τῷ ὄντι ἐν βορβόρῳ βαρβαρικῷ τινὶ τὸ τῆς ψυχῆς ὄμμα κατορωρυγμένον ἠρέμα ἕλκει καὶ ἀνάγει ἄνω, συνερίθοις καὶ συμπεριαγωγοῖς χρωμένη αἷς διήλθομεν τέχναις· ἃς ἐπιστήμας μὲν

πολλάκις προσείπομεν διὰ τὸ ἔθος, δέονται δὲ ὀνόματος ἄλλου, ἐναργεστέρου μὲν ἢ δόξης, ἀμυδροτέρου δὲ ἢ ἐπιστήμης: διάνοιαν δὲ αὐτὴν ἔν γε τῷ πρόσθεν που ὡρισάμεθα· ἔστι δ', ὡς ἐμοὶ δοκεῖ, οὐ περὶ ὀνόματος ἀμφισβήτησις, οἷς τοσούτων πέρι σκέψις ὅσων ἡμῖν πρόκειται. οὐ γὰρ οὖν, ἔφη. ἀρέσκει γοῦν, ἦν δ' ἐγώ, ὥσπερ τὸ πρότερον, τὴν μὲν πρώτην μοῖραν ἐπιστήμην καλεῖν, δευτέραν δὲ διάνοιαν, τρίτην δὲ πίστιν, καὶ εἰκασίαν τετάρτην· καὶ ξυναμφότερα μὲν ταῦτα δόξαν, ξυναμφότερα δ' ἐκεῖνα νόησιν· καὶ δόξαν μὲν περὶ γένεσιν, νόησιν δὲ περὶ οὐσίαν· καὶ ὅ τι οὐσία πρὸς γένεσιν, νόησιν πρὸς δόξαν, καὶ ὅ τι νόησις πρὸς δόξαν, ἐπιστήμην πρὸς πίστιν καὶ διάνοιαν πρὸς εἰκασίαν. τὴν δ' ἐφ' οἷς ταῦτα ἀναλογίαν καὶ διαίρεσιν διχῇ ἑκατέρου, δοξαστοῦ τε καὶ νοητοῦ, ἐῶμεν, ὦ Γλαύκων, ἵνα μὴ ἡμᾶς πολλαπλασίων λόγων ἐμπλήσῃ ἢ ὅσων οἱ παρεληλυθότες.

PLATO, *Rep.* VII. 533 C—534 A.

4. οἱ μὲν οὖν ἄρτι τῶν σοφιστῶν ἀναφυόμενοι καὶ νεωστὶ προσπεπτωκότες ταῖς ἀλαζονείαις, εἰ καὶ νῦν πλεονάζουσιν, εὖ οἶδ' ὅτι πάντες ἐπὶ ταύτην κατενεχθήσονται τὴν ὑπόθεσιν. λοιποὶ δ' ἡμῖν εἰσὶν οἱ πρὸ ἡμῶν γενόμενοι καὶ τὰς καλουμένας τέχνας γράψαι τολμήσαντες, οὓς οὐκ ἀφετέον ἀνεπιτιμήτους· οἵτινες ὑπέσχοντο δικάζεσθαι διδάξειν, ἐκλεξάμενοι τὸ δυσχερέστατον τῶν ὀνομάτων, ὃ τῶν φθονούντων ἔργον ἦν λέγειν ἀλλ' οὐ τῶν προεστώτων τῆς τοιαύτης παιδεύσεως, καὶ ταῦτα τοῦ πράγματος, καθ' ὅσον ἐστὶ διδακτόν, οὐδὲν μᾶλλον πρὸς τοὺς δικανικοὺς λόγους ἢ πρὸς τοὺς ἄλλους ἅπαντας ὠφελεῖν δυναμένου. τοσούτῳ δὲ χείρους ἐγένοντο τῶν περὶ τὰς ἔριδας καλινδουμένων, ὅσον οὗτοι μὲν τοιαῦτα λογίδια διεξιόντες, οἷς εἴ τις ἐπὶ τῶν πράξεων ἐμμείνειεν, εὐθὺς ἂν ἐν πᾶσιν εἴη κακοῖς, ὅμως ἀρετὴν ἐπηγγείλαντο καὶ σωφροσύνην περὶ αὐτῶν, ἐκεῖνοι δ' ἐπὶ τοὺς πολιτικοὺς λόγους παρακαλοῦντες, ἀμελήσαντες τῶν ἄλλων τῶν προσόντων αὐτοῖς ἀγαθῶν, πολυπραγμοσύνης καὶ πλεονεξίας ὑπέστησαν εἶναι διδάσκαλοι.

ISOCRATES κατὰ τῶν σοφιστῶν, 19—20.

5. ἡ μὲν οὖν δημηγορικὴ λέξις καὶ παντελῶς ἔοικε τῇ σκιαγραφίᾳ· ὅσῳ γὰρ ἂν πλείων ᾖ ὁ ὄχλος, πορρώτερον ἡ θέα· διὸ τὰ ἀκριβῆ περίεργα καὶ χείρω φαίνεται ἐν ἀμφοτέροις. ἡ δὲ δικανική, ἀκριβεστέρα· ἔτι δὲ μᾶλλον, ἡ ἑνὶ κριτῇ· ἐλάχιστον γάρ ἐστιν ἐν ῥητορικοῖς· εὐσύνοπτον γὰρ μᾶλλον τὸ οἰκεῖον τοῦ πράγματος, καὶ τὸ ἀλλότριον· καὶ ὁ ἀγὼν ἄπεστιν. ὥστε καθαρὰ ἡ κρίσις. διὸ οὐχ οἱ αὐτοὶ ἐν πᾶσι τούτοις εὐδοκιμοῦσι ῥήτορες· ἀλλ' ὅπου μάλιστα ὑποκρίσεως, ἐνταῦθα ἥκιστα ἀκρίβεια ἔνι. τοῦτο δὲ, ὅπου φωνῆς, καὶ μάλιστα ὅπου μεγάλης. ἡ μὲν οὖν ἐπιδεικτικὴ λέξις, γραφικωτάτη· τὸ γὰρ ἔργον αὐτῆς, ἀνάγνωσις· δευτέρα δὲ, ἡ δικανική. τὸ δὲ προσδιαιρεῖσθαι τὴν λέξιν, ὅτι ἡδεῖαν δεῖ καὶ μεγαλοπρεπῆ, περίεργον· τί γὰρ μᾶλλον ἢ σώφρονα καὶ ἐλευθέριον, καὶ εἴ τις ἄλλη ἤθους ἀρετή; τὸ γὰρ ἡδεῖαν εἶναι ποιήσει δῆλον ὅτι τὰ εἰρημένα, εἴπερ ὀρθῶς ὥρισται ἡ ἀρετὴ τῆς λέξεως· * * * καὶ τὸ ἡδεῖαν τὰ εἰρημένα ποιήσει, ἂν εὖ μιχθῇ τὸ εἰωθὸς, καὶ ξενικὸν, καὶ ὁ ῥυθμὸς, καὶ τὸ πιθανὸν ἐκ τοῦ πρέποντος.

ARISTOT. *Rhet.* III. 12. 5—6.

WEDNESDAY, *May* 21, 1884. 9 to 12.

1. For LATIN HEXAMETERS:

On a day,
Sitting upon a rock above the spray,
I saw grow up from the horizon's brink
A gallant vessel: soon she seemed to sink
Away from me again, as though her course
Had been resumed in spite of hindering force—
So vanished: and not long before arose
Dark clouds, and mutterings of winds morose.
Old Eolus would stifle his mad spleen,
But could not: therefore all the billows green
Tossed up the silver spume against the clouds.
The tempest came: I saw that vessel's shrouds
In perilous bustle; while upon the deck
Stood trembling creatures. I beheld the wreck;
The final gulfing; the poor struggling souls:
I heard their cries amid loud thunder-rolls.
O they had all been saved but crazed eld
Annulled my vigorous cravings: and thus quelled
And curbed, think on't, O Latmian! did I sit
Writhing with pity and a cursing fit
Against that hell-born Circe.

KEATS, *Endymion.*

2. For LATIN ELEGIACS:

Beauteous is Earth, but all its forest-broods
  Plot mutual slaughter, hungering to live;
Of sapphire are the skies, but when men cry
  Famished, no drops they give.

Ask of the sick, the mourners, ask of him
  Who tottereth on his staff, lone and forlorn,
'Liketh thee life?'—these say the babe is wise
  That weepeth, being born.

ARNOLD, *The Light of Asia.*

WEDNESDAY, *May* 21, 1884. 1.30—4.30.

TRANSLATE, with short marginal notes where necessary:

1. *εἷος ὁ ταῦθ' ὥρμαινε κατὰ φρένα καὶ κατὰ θυμὸν,*
ὦρσε δ' ἐπὶ μέγα κῦμα Ποσειδάων ἐνοσίχθων,
δεινόν τ' ἀργαλέον τε, κατηρεφὲς, ἤλασε δ' αὐτόν.
ὡς δ' ἄνεμος ζαὴς ἠΐων θημῶνα τινάξῃ
καρφαλέων, τὰ μὲν ἄρ τε διεσκέδασ' ἄλλυδις ἄλλῃ,
ὡς τῆς δούρατα μακρὰ διεσκέδασ'. αὐτὰρ Ὀδυσσεὺς
ἀμφ' ἑνὶ δούρατι βαῖνε, κέληθ' ὡς ἵππον ἐλαύνων,
εἵματα δ' ἐξαπέδυνε, τά οἱ πόρε δῖα Καλυψώ.
αὐτίκα δὲ κρήδεμνον ὑπὸ στέρνοιο τάνυσσεν,
αὐτὸς δὲ πρηνὴς ἁλὶ κάππεσε, χεῖρε πετάσσας,
νηχέμεναι μεμαώς· ἴδε δὲ κρείων ἐνοσίχθων,
κινήσας δὲ κάρη προτὶ ὃν μυθήσατο θυμόν·
οὕτω νῦν κακὰ πολλὰ παθὼν ἀλόω κατὰ πόντον,
εἰσόκεν ἀνθρώποισι διοτρεφέεσσι μιγήῃς·
ἀλλ' οὐδ' ὥς σε ἔολπα ὀνόσσεσθαι κακότητος.

HOMER, *Odyss.* v. 365—379.

2. *ἀπό μοι λόγον*
τοῦτον, στόμα, ῥῖψον·
ἐπεὶ τό γε λοιδορῆσαι θεοὺς
ἐχθρὰ σοφία, καὶ τὸ καυχᾶσθαι παρὰ καιρὸν
μανίαισιν ὑποκρέκει.
μὴ νῦν λαλάγει τὰ τοιαῦτ'· ἔα πόλεμον μάχαν τε πᾶσαν
χωρὶς ἀθανάτων· φέροις δὲ Πρωτογενείας
ἄστει γλῶσσαν, ἵν' αἰολοβρόντα Διὸς αἴσᾳ
Πύῤῥα Δευκαλίων τε Παρνασοῦ καταβάντε
δόμον ἔθεντο πρῶτον, ἄτερ δ' εὐνᾶς ὁμόδαμον
κτησάσθαν λίθινον γόνον·
λαοὶ δ' ὀνόμασθεν.
ἔγειρ' ἐπέων σφιν οὖρον λιγύν,
αἴνει δὲ παλαιὸν μὲν οἶνον, ἄνθεα δ' ὕμνων
νεωτέρων. λέγοντι μὰν
χθόνα μὲν κατακλύσαι μέλαιναν
ὕδατος σθένος, ἀλλὰ
Ζηνὸς τέχναις ἀνάπωτιν ἐξαίφνας
ἄντλον ἐλεῖν. κείνων δ' ἔσσαν
χαλκάσπιδες ὑμέτεροι πρόγονοι
ἀρχᾶθεν Ἰαπετιονίδος φύτλας
κοῦροι κορᾶν καὶ φερτάτων Κρονιδᾶν, ἐγχώριοι βασιλῆες αἰεί.

PINDAR, *Olymp.* 9. 35—56.

3. ΒΔΕ. *σκέψαι τοίνυν ὡς ἐξόν σοι πλουτεῖν καὶ τοῖσιν ἅπασιν,*
ὑπὸ τῶν ἀεὶ δημιζόντων οὐκ οἶδ' ὅπῃ ἐγκεκύκλησαι·
ὅστις πόλεων ἄρχων πλείστων, ἀπὸ τοῦ Πόντου μέχρι Σαρδοῦς,
οὐκ ἀπολαύεις πλὴν τοῦθ' ὃ φέρεις, ἀκαρῆ. καὶ τοῦτ' ἐρίῳ σοι
ἐνστάζουσιν κατὰ μικρὸν ἀεί, τοῦ ζῆν ἕνεχ', ὥσπερ ἔλαιον.
βούλονται γάρ σε πένητ' εἶναι· καὶ τοῦθ' ὧν εἵνεκ', ἐρῶ σοι,
ἵνα γιγνώσκῃς τὸν τιθασευτήν· κἂθ' ὅταν οὗτός γ' ἐπισίξῃ
ἐπὶ τῶν ἐχθρῶν τιν' ἐπιρρύξας, ἀγρίως αὐτοῖς ἐπιπηδᾷς.

εἰ γὰρ ἐβούλοντο βίον πορίσαι τῷ δήμῳ, ῥᾴδιον ἦν ἄν.
εἰσίν γε πόλεις χίλιαι, αἳ νῦν τὸν φόρον ἡμῖν ἀπάγουσιν·
τούτων εἴκοσιν ἄνδρας βόσκειν εἴ τις προσέταξεν ἑκάστῃ,
δύο μυριάδες τῶν δημοτικῶν ἔζων ἐν πᾶσι λαγῴοις
καὶ στεφάνοισιν παντοδαποῖσιν καὶ πυῷ καὶ πυριάτῃ,
ἄξια τῆς γῆς ἀπολαύοντες καὶ τοῦ Μαραθῶνι τροπαίου.
νῦν δ' ὥσπερ ἐλαολόγοι χωρεῖθ' ἅμα τῷ τὸν μισθὸν ἔχοντι.

ΦΙΛ. οἴμοι, τί ποθ' ὥσπερ νάρκη μου κατὰ τῆς χειρὸς καταχεῖται,
καὶ τὸ ξίφος οὐ δύναμαι κατέχειν, ἀλλ' ἤδη μαλθακός εἰμι.

ΒΔΕ. ἀλλ' ὁπόταν μὲν δείσωσ' αὐτοί, τὴν Εὔβοιαν διδόασιν
ὑμῖν καὶ σῖτον ὑφίστανται κατὰ πεντήκοντα μεδίμνους
πορεῖν· ἔδοσαν δ' οὐπώποτέ σοι, πλὴν πρώην πέντε μεδίμνους,
καὶ ταῦτα μόλις ξενίας φεύγων ἔλαβες κατὰ χοίνικα, κριθῶν.

ARISTOPHANES, *Wasps*, 698—718.

4. ΧΟ. φράζου μὴ πόρσω φωνεῖν.
οὐ γνώμαν ἴσχεις ἐξ οἵων
τὰ παρόντ' οἰκείας εἰς ἄτας
ἐμπίπτεις οὕτως αἰκῶς;
πολὺ γάρ τι κακῶν ὑπερεκτήσω,
σᾷ δυσθύμῳ τίκτουσ' ἀεὶ
ψυχᾷ πολέμους· τὰ δὲ τοῖς δυνατοῖς
οὐκ ἐριστὰ πλάθειν.

ΗΛ. δεινοῖς ἠναγκάσθην, δεινοῖς·
ἔξοιδ', οὐ λάθει μ' ὀργά.
ἀλλ' ἐν γὰρ δεινοῖς οὐ σχήσω
ταύτας ἄτας,
ὄφρα με βίος ἔχῃ.
τίνι γάρ ποτ' ἂν, ὦ φιλία γενέθλα,
πρόσφορον ἀκούσαιμ' ἔπος, τίνι
φρονοῦντι καίρια;
ἄνετέ μ' ἄνετε, παράγοροι.
τάδε γὰρ ἄλυτα κεκλήσεται·
οὐδέ ποτ' ἐκ καμάτων ἀποπαύσομαι
ἀνάριθμος ὧδε θρήνων.

ΧΟ. ἀλλ' οὖν εὐνοίᾳ γ' αὐδῶ,
μάτηρ ὡσεί τις πιστά,
μὴ τίκτειν σ' ἄταν ἄταις.

ΗΛ. καὶ τί μέτρον κακότατος ἔφυ; φέρε,
πῶς ἐπὶ τοῖς φθιμένοις ἀμελεῖν καλόν;
ἐν τίνι τοῦτ' ἔβλαστ' ἀνθρώπων;
μήτ' εἴην ἔντιμος τούτοις
μήτ', εἴ τῳ πρόσκειμαι χρηστῷ,
ξυνναίοιμ' εὔκηλος, γονέων
ἐκτίμους ἴσχουσα πτέρυγας
ὀξυτόνων γόων.

SOPHOCLES, *Electra*, 213—243.

5. ΚΟ. αἶγες ἐμαί, τῆνον τὸν ποιμένα τόνδε Σιβύρτα
φεύγετε τὸν Λάκωνα· τό μευ νάκος ἐχθὲς ἔκλεψεν.

ΛΑ. οὐκ ἀπὸ τᾶς κράνας σίττ' ἀμνίδες; οὐκ ἐσορῆτε
τόν μευ τὰν σύριγγα πρόαν κλέψαντα Κομάταν;

ΚΟ. τὰν ποίαν σύριγγα; τὺ γάρ ποκα δῶλε Σιβύρτα
ἐκτάσα σύριγγα; τί δ' οὐκέτι σὺν Κορύδωνι
ἀρκεῖ τοι καλάμας αὐλὸν ποππύσδεν ἔχοντι;

ΛΑ. τάν μοι ἔδωκε Λύκων ὠλεύθερε. τὶν δὲ τὸ ποῖον
Λάκων ἀγκλέψας πόκ' ἔβαν νάκος; εἰπὲ Κομᾶτα·
οὐδὲ γὰρ Εὐμάρᾳ τῷ δεσπότᾳ ἧς τι ἐνεύδειν.

ΚΟ. τὸ Κροκύλος μοι ἔδωκε, τὸ ποικίλον, ἀνίκ' ἔθυσε
ταῖς Νύμφαις τὰν αἶγα· τὺ δ' ὦ κακὲ καὶ τόκ' ἐτάκευ
βασκαίνων, καὶ νῦν με τὰ λοίσθια γυμνὸν ἔθηκας.

ΛΑ. οὐ μαὐτὸν τὸν Πᾶνα τὸν ἄκτιον, οὐ τέ γε Λάκων
τὰν βαίταν ἀπέδυσ' ὁ Καλαίθιδος, ἢ κατὰ τήνας
τᾶς πέτρας ὤνθρωπε μανεὶς εἰς Κρᾶθιν ἁλοίμαν.

ΚΟ. οὐ μὰν οὐδ' αὐτὰς τὰς λιμνάδας ὠγαθὲ Νύμφας,
αἴτέ μοι ἵλαοί τε καὶ εὐμενέες τελέθοιεν,
οὔ τευ τὰν σύριγγα λαθὼν ἔκλεψα Κομάτας.

ΛΑ. αἴ τοι πιστεύσαιμι, τὰ Δάφνιδος ἄλγε' ἀροίμαν.
ἀλλ' ὧν αἴκα λῇς ἔριφον θέμεν, ἔστι μὲν οὐδὲν
ἱερόν, ἀλλ' ἄγε τοι διαείσομαι, ἔστέ κ' ἀπείπῃς.

THEOCRITUS, v. 1—22.

FRIDAY, *May* 23, 1884. 9 to 10.30.

1. GREEK GRAMMAR AND CRITICISM.

(Careful accentuation is required throughout.)

1. (*a*) WRITE down the principal case-forms in use (Homeric included) belonging to *κάρα, ναῦς, υἱός*, excluding in the case of *υἱός* all forms derived regularly from the stem *υἱο-*. (*b*) State with examples the ordinary methods of forming patronymics and gentile appellations.

2. Construct short sentences illustrating the chief uses of the dative case, and show how far the definition of the dative as the case of the remoter object is an adequate one.

3. (*a*) State the ordinary rules for the use of the negatives in dependent relative clauses.

(*b*) Translate the following sentences and comment on the use of the negatives: (*α*) *μή τι σοὶ δοκῶ ταρβεῖν*; AESCH. (*β*) *μὰ τὴν Ἀφροδίτην, μὴ 'γώ σ' ἀφήσω.* ARISTOPH. (*γ*) *ἄγετέ μ' ἐκποδὼν τὸν οὐκ ὄντα μᾶλλον ἢ μηδένα.* SOPH. (*δ*) *οὐ γὰρ ἂν μακρὰν ἴχνευον αὐτὸς μὴ οὐκ ἔχων τι σύμβολον.* SOPH. (*ε*) *οἶμαι ἂν μὴ ὅτι ἰδιώτην τινὰ ἀλλὰ τὸν μέγαν βασιλέα εὐαριθμήτους ἂν εὑρεῖν αὐτὸν ταύτας.* PLAT. (*ζ*) *οὐχ ὅτι στρατηγὸς ἀλλ' οὐδ' ὁ τυχὼν ἄνθρωπος.* DEMOSTH. (*η*) *σχολῇ γὰρ ἄν τι ἄλλο φθορὰν μὴ δέχοιτο.* PLAT.

4. "Among the conjunctions four cases can be distinguished, viz. Accusative, Locative, Instrumental, Ablative." Explain and illustrate this statement.

5. Discuss the supposed use of the aorist infinitive in a future sense, and translate and comment on the following passages:—(*a*) *θεοῦ τε γὰρ θέλοντος ἐκπέρσειν πόλιν καὶ μὴ θέλοντός φησιν, οὐδέ νιν Διὸς Ἔριν πέδοι σκήψασαν ἐμποδὼν σχεθεῖν.* AESCH. *S. c. T.* 428. (*β*) *ἔλπιζε γὰρ αὐτὸν καὶ περὶ σὲ γενέσθαι τοιοῦτον οἷος καὶ περὶ ἐκείνους γέγονε.* ISOCR. *Dem.* 24. (*γ*) *ἔχοντες δὲ κόσμον καὶ ἔπιπλα καὶ ἱμάτια γυναικεῖα ὅσα οὐδεπώποτε ᾤοντο κτήσασθαι.* LYSIAS, XII 19.

6. (*a*) State as concisely as possible, with examples if necessary, the general principles regulating the use of the different tenses and moods in the indirect quotation of compound sentences.

(*b*) Convert the following passage into indirect narration:—*δρῶμεν δ' ἂν ἄδικον οὐδέν· λύουσι γὰρ σπονδὰς οὐχ οἱ δι' ἐρημίαν ἄλλοις προσιόντες, ἀλλ' οἱ μὴ βοηθοῦντες οἷς ἂν ξυνομόσωσι. βουλομένων δὲ ὑμῶν προθύμων εἶναι μενοῦμεν· οὔτε γὰρ ὅσια ἂν ποιοῖμεν μεταβαλλόμενοι, οὔτε ξυνηθεστέρους ἂν ἄλλους εὕροιμεν. πρὸς τάδε βουλεύεσθε εὖ, καὶ τὴν Πελοπόννησον πειρᾶσθε μὴ ἐλάσσω ἐξηγεῖσθαι ἢ οἱ πατέρες ὑμῖν παρέδοσαν.* THUC. I 71.

FRIDAY, *May* 23, 1884. 10.30—12 M.

2. LATIN GRAMMAR AND CRITICISM.

1. WHAT modifications or additions took place in the Roman alphabet after 300 B.C., and what changes were made in the representation of double consonants and long vowels? In transliteration what various letters were used to represent ζ, θ, φ, χ?

2. Explain how the following examples may be harmonised with the general rules regulating concord in Latin:—(*a*) *foras exite huc aliquis.* PLAUT. *Epid.* 398. (*b*) *argenti mille dederat mutuom.* TER. *Haut.* 601. (*c*) *dux hostium cum urbe Valentia et exercitu deleti.* SALL. *Fr.* (*d*) *capita coniurationis uirgis caesi.* LIV. X. 7.

3. How is agency expressed in Latin? Explain apparent anomalies in the following sentences:—(*a*) *populos multis scriptoribus memoratos.* TAC. *Agr.* 10. (*b*) *aguntur bona multorum ciuium quibus est a uobis consulendum.* CIC. *Man.* 6. (*c*) *piget dicere ut nobis animus ab ignauia corruptus sit.* SALL. *Iug.* 31.

4. Explain the use of *si* and *ni* in the following passages:—(*a*) *mirum ni hic me quasi muraenam exossare cogitat.* PLAUT. *Am.* 319. (*b*) *Rubrius Apronium sponsione lacessiuit, ni Apronius dictitaret te sibi esse socium.* CIC. *Verr.* III. 132. (*c*) *hanc paludem si nostri transirent expectabant hostes.* CAES. *B. G.* II. 9. (*d*) *ibo, uisam si intus sit.* TER. *Haut.* 170.

5. Explain the use of moods in the following sentences:—(*a*) *at etiam literas, quas me sibi misisse diceret, recitauit.* CIC. *Phil.* II. 7. (*b*) *Themistocles Xerxem certiorem fecit id agi ut pons, quem in Hellesponto fecerat, dissolueretur.* NEP. II. 9. (*c*) *admonemus ciues nos eorum esse et, si non easdem opes habere, eandem tamen patriam incolere.* LIV. IV. 3.

6. Translate into English the following inscriptions, pointing out any archaic forms:

(*a*) m · fourio · c · f · tribunos · militare · de · praidad · maurte · dedet ·

(*b*) heisce · magistreis · uenerus · iouiae · mur*um* | aedificandum · coirauerunt · ped · cc ↓ xx · et | loidos · fecerunt · ser · sulpicio · m · aurelio · cos ·

FRIDAY, *May* 23, 1884. 1.30—4.30 P.M.

TRANSLATE into ENGLISH PROSE with short marginal notes:

1. syllaba longa breui subiecta uocatur iambus,
pes citus; unde etiam trimetris accrescere iussit
nomen iambeis, cum senos redderet ictus
primus ad extremum similis sibi: non ita pridem,
tardior ut paullo grauiorque ueniret ad aures,
spondeos stabilis in iura paterna recepit
commodus et patiens, non ut de sede secunda
cederet aut quarta socialiter. hic et in Acci
nobilibus trimetris apparet rarus, et Enni
in scaenam missos cum magno pondere uersus
aut operae celeris nimium curaque carentis
aut ignoratae premit artis crimine turpi.
non quiuis uidet immodulata poemata iudex,
et data Romanis uenia est indigna poetis.
idcircone uager scribamque licenter? an omnis
uisuros peccata putem mea, tutus et intra
spem ueniae cautus? uitaui denique culpam,
non laudem merui.

HORACE, *Ars Poet.* 251—268.

2. ite, rates curuate et leti texite causas:
ista per humanas mors uenit acta manus.
terra parum fuerat; fatis adiecimus undas:
fortunae miseras auximus arte uias.
ancora te teneat quem non tenuere Penates?
quid meritum dicas cui sua terra parumst?
uentorumst quodcumque paras: haut ulla carina
consenuit; fallit portus et ipse fidem.
natura insidians pontum substrauit auaris:
ut tibi succedat, uix semel esse potest.
saxa triumphales fregere Capharea puppes,
naufraga cum uasto Graecia tracta salost.
paulatim socium iacturam fleuit Ulixes,
in mare cui soliti non ualuere doli.
quod si contentus patrio boue uerteret agros,
uerbaque duxisset pondus habere mea,
uiueret ante suos dulcis conuiua Penates,
pauper, at in terra, nil ubi *flare potest.

* v. l. flere

PROPERTIUS, IV. vii. 29—46.

3. externis famulantur sacris, ac digitis deos gestant, monstra quoque colunt, damnant et excogitant cibos, imperia dira in ipsos ne somno quidem quieto inrogant. non matrimonia, non liberos, non denique quicquam aliud nisi iuuantibus sacris deligunt. alii in Capitolio fallunt ac fulminantem periurant Iouem, et hos iuuant scelera, illos sacra sua poenis agunt. inuenit tamen inter has utrasque sententias

medium sibi ipsa mortalitas numen, quo minus etiam plana de deo coniectatio esset. toto quippe mundo et omnibus locis omnibusque horis omnium uocibus Fortuna sola inuocatur ac nominatur, una accusatur, una agitur rea, una cogitatur, sola laudatur, sola arguitur. et cum conuiciis colitur, uolubilis, a plerisque uero et caeca existimata, uaga, inconstans, incerta, uaria, indignorumque fautrix. huic omnia expensa, huic omnia feruntur accepta, et in tota ratione mortalium sola utramque paginam facit, adeoque obnoxiae sumus sortis, ut sors ipsa pro deo sit, qua deus probatur incertus. pars alia et hanc pellit astroque suo euentus adsignat nascendi legibus, semelque in omnes futuros umquam deo decretum, in reliquom uero otium datur. sedere coepit sententia haec, pariterque et eruditum uolgus et rude in eam cursu uadit.

PLINY, *Nat. Hist.* II. vii. §§ 21—23.

4. ἔστιν γὰρ ὁσία ψῆφος, ἣν Ἄρει ποτὲ
Ζεὺς εἵσατ' ἔκ του δὴ χερῶν μιάσματος.
ἐλθὼν δ' ἐκεῖσε, πρῶτα μέν μ' οὐδεὶς ξένων
ἑκὼν ἐδέξαθ', ὡς θεοῖς στυγούμενον·
οἳ δ' ἔσχον αἰδῶ, ξένια μονοτράπεζά μοι
παρέσχον, οἴκων ὄντες ἐν ταὐτῷ στέγει,
σιγῇ δ' ἐτεκτήναντο κἄφθεγκτόν μ', ὅπως
δαιτὸς γενοίμην πώματός τ' αὐτῶν δίχα,
εἷς δ' ἄγγος ἴδιον ἴσον ἅπασι βακχίου
μέτρημα πληρώσαντες εἶχον ἡδονήν.
κἀγὼ 'ξελέγξαι μὲν ξένους οὐκ ἠξίουν,
ἤλγουν δὲ σιγῇ κἀδόκουν οὐκ εἰδέναι,
μέγα στενάζων, οὕνεκ' ἡ μητρὸς φονεύς,
κλύω δ' Ἀθηναίοισι τἀμὰ δυστυχῆ
τελετὴν γενέσθαι, κἄτι τὸν νόμον μένειν,
χοῆρες ἄγγος Παλλάδος τιμᾶν λεών.
ὡς δ' εἰς Ἄρειον ὄχθον ἧκον, ἐς δίκην
ἔστην, ἐγὼ μὲν θάτερον λαβὼν βάθρον,
τὸ δ' ἄλλο πρέσβειρ' ἥπερ ἦν Ἐρινύων.
εἰπὼν δ' ἀκούσας θ' αἵματος μητρὸς πέρι,
Φοῖβός μ' ἔσωσε μαρτυρῶν· ἴσας δέ μοι
ψήφους διερρύθμιζε Παλλὰς ὠλένῃ,
νικῶν δ' ἀπῆρα φόνια πειρατήρια.

EURIPIDES, *Iph. Taur.* 945—967.

5. ἀκούσας τοίνυν ἡμῶν, ὦ ἄνδρες Ἀθηναῖοι, ὁ Θεόδοτος πολλάκις, καὶ νομίσας τὸν Λάμπιν ψευδῆ μαρτυρεῖν, οὐκ ἀπέγνω τῆς δίκης, ἀλλ' ἐφῆκεν ἡμᾶς εἰς τὸ δικαστήριον· καταγνῶναι μὲν γὰρ οὐκ ἐβουλήθη διὰ τὸ οἰκείως ἔχειν Φορμίωνι τούτῳ, ὡς ἡμεῖς ὕστερον ἐπυθόμεθα, ἀπογνῶναι δὲ τῆς δίκης ὤκνει, ἵν' αὐτὸς μὴ ἐπιορκήσειεν. ἐξ αὐτοῦ δὴ τοῦ πράγματος λογίσασθε, ὦ ἄνδρες δικασταί, παρ' ὑμῖν αὐτοῖς ὁπόθεν ἔμελλεν οὗτος ἀποδώσειν τὸ χρυσίον. ἐνθένδε μὲν γὰρ ἐξέπλει οὐκ ἐνθέμενος εἰς τὴν ναῦν τὰ χρήματα καὶ ὑποθήκην οὐκ ἔχων, ἀλλ' ἐπὶ τοῖς ἐμοῖς χρήμασιν ἐπιδανεισάμενος· ἐν Βοσπόρῳ δ' ἀπρασίαν τῶν φορτίων κατέλαβε, καὶ τοὺς τὰ ἑτερόπλοα δανείσαντας μόλις ἀπήλλαξεν. καὶ οὗτος μὲν ἐδάνεισεν αὐτῷ δισχιλίας δραχμὰς ἀμφοτερόπλουν, ὥστ' ἀπολαβεῖν Ἀθήνησι δισχιλίας ἑξακοσίας δραχμάς· Φορμίων δέ φησιν ἀποδοῦναι Λάμπιδι ἐν Βοσπόρῳ ἑκατὸν καὶ εἴκοσι στατῆρας Κυζικηνοὺς (τούτῳ γὰρ προσέχετε τὸν νοῦν) δανεισάμενος ἐγγείων τόκων. ἦσαν δὲ ἔφεκτοι οἱ ἔγγειοι τόκοι, ὁ δὲ Κυζικηνὸς ἐδύνατο ἐκεῖ εἴκοσι καὶ ὀκτὼ δραχμὰς Ἀττικάς. δεῖ δὴ μαθεῖν ὑμᾶς ὅσα φησὶ χρήματ' ἀποδεδωκέναι. τῶν μὲν γὰρ ἑκατὸν καὶ εἴκοσι στατήρων γίγνονται τρισχίλιαι τριακόσιαι ἑξήκοντα, ὁ δὲ τόκος ὁ ἔγγειος ὁ ἔφεκτος τῶν τριάκοντα μνῶν καὶ τριῶν καὶ ἑξήκοντα, πεντακόσιαι δραχμαὶ καὶ ἑξήκοντα· τὸ δὲ σύμπαν κεφάλαιον γίγνεται τόσον καὶ τόσον.

DEMOSTHENES, *c. Phorm.* §§ 21—24.

SATURDAY, *May* 24, 1884. 9—10.30.

GREEK HISTORY AND ANTIQUITIES.

1. WRITE the history of the relations between the Greek states of Asia Minor and the Asiatic monarchies down to the time of the first Persian expedition against Greece.

2. *διὸ καὶ τοῦ Κίμωνος πειρωμένου τὴν ἐπὶ Κλεισθένους ἐγείρειν ἀριστοκρατίαν κατεβόων.* PLUTARCH.

Shew in what respects this description is applicable to the constitution of Cleisthenes as compared with the fully developed Athenian democracy.

3. Give a brief account of the events in Greece which led to the recall of Agesilaus from Asia, and of the events which followed, down to the rebuilding of the Long Walls of Athens.

4. Write a sketch of the part played in Grecian politics by the Amphictyonic Council during the period between the battles of Leuctra and Chaeronea.

5. Give some account of the chief sources of the public revenues of Athens under the administration of Pericles, and explain what important change was introduced into her financial system during the Peloponnesian War.

6. Discuss briefly the leading characteristics of the Hesiodic as compared with the Homeric poems:

or,

Give a short account of the life and writings of *any three* of the following: Arrian, Dionysius of Halicarnassus, Lucian, Pausanias, Polybius.

SATURDAY, *May* 24, 1884. 10.30—12.

ROMAN HISTORY AND ANTIQUITIES.

I. 'ON the Roman household was based the Roman state, both as respected its constituent elements and its form.'

Explain and expand this.

II. Give some account of the war between Pyrrhus and Rome, and show what connection it had with the Roman conquest of Italy.

III. Write down a connected chronological survey of events between the death of Sulla and the conference at Luca.

IV. Describe the political position of the Roman world at the death of Nero, and indicate the subsequent course of events to the accession of Vespasian.

V. Give some account of the principal Latin writers who flourished during the reign of Trajan.

VI. 'Ille nefastus erit, per quem tria verba silentur.'

Explain this, and briefly sketch the main functions of the praetor urbanus.

Or

Give a general account of the proceedings at an election to the consulate in the time of Cicero.

CLASSICAL TRIPOS.

PART II.

SECTION A.

MONDAY, *May* 26, 1884. 9—12.

FOR GREEK PROSE:

1. There can be no doubt that the annals of this period, as we have them now in Livy and Dionysius, present a very incomplete picture of these dissensions. The original source of the details must have been the memorials of the several great families; each successive version of these, as men's notions of their early history became more and more romantic, would omit whatever seemed inconsistent with the supposed purity and nobleness of the times of their forefathers; and acts of bloody vengeance, which the actors themselves, and their immediate descendants, regarded with pride rather than compunction, as Sulla gloried in his proscriptions and recorded them on his monument, were carefully suppressed by historians of a later age. The burghers of the earlier days thought it no dishonour that their own daggers, or those of their faithful clients, should have punished with death the insolence and turbulence of the most obstinate of the commons; they would glory in breaking up the assemblies of their adversaries by main force, and in treating them on other occasions with all possible scorn and contumely.

ARNOLD'S *History of Rome.*

2. Another kind of labour, usually classed as mental, but conducing to the ultimate product as directly, though not so immediately, as manual labour itself, is the labour of the inventors of industrial processes. I say, usually classed as mental, because in reality it is not exclusively so. All human exertion is compounded of some mental and some bodily elements. The stupidest hodman, who repeats from day to day the mechanical act of climbing a ladder, performs a function partly intellectual; the most intelligent dog or elephant could not probably be taught to do it. The dullest human being instructed beforehand is capable of turning a mill; but a horse cannot turn it without somebody to drive and watch him. On the other hand, there is some bodily ingredient in the labour most purely mental, when it generates any external result. Newton could not have produced the Principia without the bodily exertion, either of penmanship or of dictation; and he must have drawn many figures, and written out many calculations and demonstrations while he was preparing it in his mind. Inventors, besides the labour of their brains, generally go through much labour with their hands, in the models which they construct and the experiments they have to make before their idea can realise itself in act. Whether mental, however, or bodily, their labour is a part of that by which the production is brought about.

MILL'S *Political Economy.*

MONDAY, *May* 26, 1884. 1.30—4.30 P.M.

TRANSLATE, with such notes as appear necessary:

1. οἱ δ' Ἀργεῖοι καὶ οἱ ξύμμαχοι ὡς εἶδον αὐτούς, καταλαβόντες χωρίον ἐρυμνὸν καὶ δυσπρόσοδον παρετάξαντο ὡς ἐς μάχην. καὶ οἱ Λακεδαιμόνιοι εὐθὺς αὐτοῖς ἐπῄεσαν· καὶ μέχρι μὲν λίθου καὶ ἀκοντίου βολῆς ἐχώρησαν, ἔπειτα τῶν πρεσβυτέρων τις Ἄγιδι ἐπεβόησεν, ὁρῶν πρὸς χωρίον καρτερὸν ἰόντας σφᾶς, ὅτι διανοεῖται κακὸν κακῷ ἰᾶσθαι, δηλῶν τῆς ἐξ Ἄργους ἐπαιτίου ἀναχωρήσεως τὴν παροῦσαν ἄκαιρον προθυμίαν ἀνάληψιν βουλομένην εἶναι. ὁ δέ, εἴτε καὶ διὰ τὸ ἐπιβόημα εἴτε καὶ αὐτῷ ἄλλο τι ἢ κατὰ τὸ αὐτὸ δόξαν ἐξαίφνης, πάλιν τὸ στράτευμα κατὰ τάχος πρὶν ξυμμῖξαι ἀπῆγεν. καὶ ἀφικόμενος πρὸς τὴν Τεγεᾶτιν τὸ ὕδωρ ἐξέτρεπεν ἐς τὴν Μαντινικήν, περὶ οὗπερ ὡς τὰ πολλὰ βλάπτοντος ὁποτέρωσε ἂν ἐσπίπτῃ Μαντινῆς καὶ Τεγεᾶται πολεμοῦσιν. ἐβούλετο δὲ τοὺς ἀπὸ τοῦ λόφου βοηθοῦντας ἐπὶ τὴν τοῦ ὕδατος ἐκτροπήν, ἐπειδὰν πύθωνται, καταβιβάσαι τοὺς Ἀργείους καὶ τοὺς ξυμμάχους, καὶ ἐν τῷ ὁμαλῷ τὴν μάχην ποιεῖσθαι. καὶ ὁ μὲν τὴν ἡμέραν ταύτην μείνας αὐτοῦ περὶ τὸ ὕδωρ ἐξέτρεπεν· οἱ δ' Ἀργεῖοι καὶ οἱ ξύμμαχοι τὸ μὲν πρῶτον καταπλαγέντες τῇ ἐξ ὀλίγου αἰφνιδίῳ αὐτῶν ἀναχωρήσει οὐκ εἶχον ὅ τι εἰκάσωσιν· εἶτ' ἐπειδὴ ἀναχωροῦντες ἐκεῖνοί τε ἀπέκρυψαν καὶ σφεῖς ἡσύχαζον καὶ οὐκ ἐπηκολούθουν, ἐνταῦθα τοὺς ἑαυτῶν στρατηγοὺς αὖθις ἐν αἰτίᾳ εἶχον, τό τε πρότερον καλῶς ληφθέντας πρὸς Ἄργει Λακεδαιμονίους ἀφεθῆναι, καὶ νῦν ὅτι ἀποδιδράσκοντας οὐδεὶς ἐπιδιώκει, ἀλλὰ καθ' ἡσυχίαν οἱ μὲν σώζονται σφεῖς δὲ προδίδονται. οἱ δὲ στρατηγοὶ ἐθορυβήθησαν μὲν τὸ παραυτίκα, ὕστερον δὲ ἀπάγουσιν αὐτοὺς ἀπὸ τοῦ λόφου καὶ προελθόντες ἐς τὸ ὁμαλὸν ἐστρατοπεδεύσαντο ὡς ἰόντες ἐπὶ τοὺς πολεμίους.

THUCYDIDES V. 65.

2. κἄδρων τοιαῦτα. νῦν δ', ὅτ' ἦν ἐργαστέον,
ἔχρισα μὲν κατ' οἶκον ἐν δόμοις κρυφῇ
μαλλῷ, σπάσασα κτησίου βοτοῦ λάχνην,
κἄθηκα συμπτύξασ' ἁλαμπὲς ἡλίου
κοίλῳ ζυγάστρῳ δῶρον, ὥσπερ εἴδετε.
εἴσω δ' ἀποστείχουσα δέρκομαι φάτιν
ἄφραστον, ἀξύμβλητον ἀνθρώπῳ μαθεῖν.
τὸ γὰρ κάταγμα τυγχάνω ῥίψασά πως
τῆς οἰός, ᾧ προὔχριον, ἐς μέσην φλόγα,
ἀκτῖν' ἐς ἡλιῶτιν· ὡς δ' ἐθάλπετο,
ῥεῖ πᾶν ἄδηλον καὶ κατέψηκται χθονί,
μορφῇ μάλιστ' εἰκαστὸν ὥστε πρίονος
ἐκβρώματ' ἂν βλέψειας ἐν τομῇ ξύλου.
τοιόνδε κεῖται προπετές. ἐκ δὲ γῆς, ὅθεν
προὔκειτ', ἀναζέουσι θρομβώδεις ἀφροί,
γλαυκῆς ὀπώρας ὥστε πίονος ποτοῦ
χυθέντος ἐς γῆν Βακχίας ἀπ' ἀμπέλου.
ὥστ' οὐκ ἔχω τάλαινα ποῖ γνώμης πέσω·
ὁρῶ δέ μ' ἔργον δεινὸν ἐξειργασμένην.
πόθεν γὰρ ἄν ποτ' ἀντὶ τοῦ θνήσκων ὁ θὴρ
ἐμοὶ παρέσχ' εὔνοιαν, ἧς ἔθνησχ' ὕπερ
οὐκ ἔστιν, ἀλλὰ τὸν βαλόντ' ἀποφθίσαι
χρῄζων ἔθελγέ μ': ὧν ἐγὼ μεθύστερον,
ὅτ' οὐκέτ' ἀρκεῖ, τὴν μάθησιν ἄρνυμαι.

SOPHOCLES *Trachiniae* 688—711.

3. πολλοὶ δ' Ἀχαιῶν ἐν δορὶ καὶ πετρίναις
ῥιπαῖσιν ἐκπνεύσαντες Ἅιδαν μέλεον ἔχουσιν,
τάλαιναν ὧν ἀλόχων
κείραντες ἔθειραν· ἄνυμφα μέλαθρα δὲ κεῖται·
πολλὰ δὲ πυρσεύσας φλογερὸν σέλας ἀμφιρύταν
Εὔβοιαν εἶλ' Ἀχαιῶν
μονόκωπος ἀνήρ, πέτραις
Καφηρίσιν ἐμβαλὼν
Αἰγαίαις τ' ἐνάλοισιν ἀκταῖς,
δόλιον ἀστέρα λάμψας.
ἀλίμενα δ' ὄρεα μέλεα, βαρβάρου στολᾶς
ὅτ' ἔσυτο πατρίδος ἀποπρὸ χειμάτων πνοᾷ
γέρας οὐ γέρας, ἀλλ' ἔριν
Δαναῶν νεφέλαν ἐπὶ ναυσὶν ἄγων,
εἴδωλον ἱρὸν Ἥρας.
ὅ τι θεὸς ἢ μὴ θεὸς ἢ τὸ μέσον,
τίς φησ' ἐρευνήσας βροτῶν
μακρότατον πέρας εὑρεῖν,
ὃς τὰ θεῶν ἐσορᾷ
δεῦρο καὶ αὖθις ἐκεῖσε
καὶ πάλιν ἀντιλόγοις
πηδῶντ' ἀνελπίστοις τύχαις;
σὺ Διὸς ἔφυς, ὦ Ἑλένα, θυγάτηρ·
πτανὸς γὰρ ἐν κόλποις σε Λή-
δας ἐτέκνωσε πατήρ.
καὶ ἰαχὴ σὴ καθ' Ἑλλανίαν
ἄδικος προδότις ἄπιστος ἄθεος· οὐδ' ἔχω
τί τὸ σαφές, ὅ τι ποτ' ἐν βροτοῖς.
τὸ θεῶν ἔπος ἀλαθὲς εὗρον.
ἄφρονες ὅσοι τὰς ἀρετὰς πολέμῳ
κτᾶσθε δορὸς ἀλκαίου λόγχαι-
σιν καταπαυόμενοι πό-
νους θνατῶν ἀπαθῶς.
εἰ γὰρ ἅμιλλα κρινεῖ νιν
αἵματος, οὔποτ' ἔρις
λείψει κατ' ἀνθρώπων πόλεις.

EURIPIDES *Helena* 1122—1157.

4. τὰ μὲν οὖν πόλλ' ὧν λέγων ὑμᾶς ἐφενάκιζε παραλείψω· φήσας δὲ ἀπορρεῖν τὰ φύλλα τῶν στεφάνων καὶ σαπροὺς εἶναι διὰ τὸν χρόνον, ὥσπερ ἴων ἢ ῥόδων ὄντας, ἀλλ' οὐ χρυσίου, συγχωνεύειν ἔπεισεν. κᾆτ' ἐπὶ μὲν ταῖς εἰσφοραῖς τὸν δημόσιον παρεῖναι προσέγραψεν ὡς δὴ δίκαιος ὤν, ὧν ἕκαστος ἀντιγραφεὺς ἔμελλεν ἔσεσθαι τῶν εἰσενεγκόντων· ἐπὶ τοῖς στεφάνοις δ', οὓς κατέκοπτεν, οὐχὶ προσήγαγε ταὐτὸ δίκαιον τοῦτο, ἀλλ' αὐτὸς ῥήτωρ, χρυσοχόος, ταμίας, ἀντιγραφεὺς γέγονεν. καὶ μὴν εἰ μὲν ἅπαντ' ἠξίους, ὅσα πράττεις τῇ πόλει, σαυτῷ πιστεύειν, οὐκ ἂν ὁμοίως κλέπτης ὢν ἐφωρῶ· νῦν δ' ἐπὶ ταῖς εἰσφοραῖς ὃ δίκαιόν ἐσθ' ὁρίσας, μὴ σοὶ πιστεύειν, ἀλλὰ τοῖς ἑαυτῆς δούλοις τὴν πόλιν, ὁπότ' ἄλλο τι πράττων καὶ χρήματα κινῶν ἱερά, ὧν ἔνια οὐδ' ἐπὶ τῆς ἡμετέρας γενεᾶς ἀνετέθη, μὴ προσγραψάμενος τὴν αὐτὴν φυλακὴν ἥνπερ ἐπὶ τῶν εἰσφορῶν φαίνει, οὐκ εὔδηλον δι' ἃ τοῦτ' ἐποίησας; ἐγὼ μὲν οἶμαι. καὶ μήν, ὦ ἄνδρες Ἀθηναῖοι, καὶ κατὰ παντὸς τοῦ χρόνου σκέψασθε ὡς καλὰ καὶ ζηλωτὰ ἐπιγράμματα τῆς πόλεως ἀνελὼν ὡς ἀσεβῆ καὶ δεινὰ ἀντεπιγέγραφεν.

DEMOSTHENES *contra Androtionem* 70—72.

TUESDAY, *May* 27, 1884. 9 A.M.—12 NOON.

FOR LATIN PROSE:

1. So violently did the passions of hatred, fear, and jealousy, operate upon his mind, that, in order to gratify his vengeance, he scrupled not to defeat an enterprise of the greatest moment to his country. Under pretexts which were false, but plausible, he desired Balboa to postpone his voyage for a short time, and to repair to Acla, in order that he might have an interview with him. Balboa, with the unsuspicious confidence of a man conscious of no crime, instantly obeyed the summons; but as soon as he entered the place, he was arrested by order of Pedrarias, whose impatience to satiate his revenge did not suffer him to languish long in confinement. Judges were immediately appointed to proceed to his trial. An accusation of disloyalty to the king, and of an intention to revolt against the governor, was preferred against him. Sentence of death was pronounced; and though the judges who passed it, seconded by the whole colony, interceded warmly for his pardon, Pedrarias continued inexorable; and the Spaniards beheld with astonishment and sorrow the public execution of a man whom they universally deemed more capable than any who had borne command in America, of forming and accomplishing great designs. Upon his death, the expedition which he had planned was relinquished.

ROBERTSON.

2. Man is an animal formidable both from his passions and his reason; his passions often urging him to great evils, and his reason furnishing means to achieve them. To tame this animal, and make him amenable to order, to inure him to a sense of justice and virtue, to withhold him from ill courses by fear, and encourage him in his duty by hopes; in short to fashion and model him for society, hath been the aim of civil and religious institutions; and in all times the endeavour of good and wise men. The aptest method for attaining this end hath been always judged a proper education.

If men's actions are an effect of their principles, that is, of their notions, their belief, their persuasions; it must be admitted that principles early sown in the mind are the seeds which produce fruit in the ripe state of manhood. How lightly soever some men may speak of notions, yet, so long as the soul governs the body, men's notions must influence their actions, more or less, as they are stronger or weaker; and to good or evil, as they are better or worse.

BERKELEY.

TUESDAY, *May* 27, 1884. 1.30—4.30.

TRANSLATE with marginal notes where required:

1. Nec minor Euryali caedes; incensus et ipse
perfurit ac multam in medio sine nomine plebem,
Fadumque Herbesumque subit Rhoetumque Abarimque,
ignaros, Rhoetum vigilantem et cuncta videntem,
sed magnum metuens se post cratera tegebat;
pectore in adverso totum cui comminus ensem
condidit adsurgenti et multa morte recepit.
purpuream vomit ille animam et cum sanguine mixta
vina refert moriens; hic furto fervidus instat.
iamque ad Messapi socios tendebat; ibi ignem
deficere extremum et religatos rite videbat
carpere gramen equos: breviter cum talia Nisus,
sensit enim nimia caede atque cupidine ferri,
'absistamus' ait, 'nam lux inimica propinquat.
poenarum exhaustum satis est, via facta per hostis.'
multa virum solido argento perfecta relinquunt
armaque craterasque simul pulchrosque tapetas.
Euryalus phaleras Rhamnetis et aurea bullis
cingula, Tiburti Remulo ditissimus olim
quae mittit dona hospitio cum iungeret absens
Caedicus, ille suo moriens dat habere nepoti,
post mortem bello Rutuli pugnaque potiti;
haec rapit atque umeris nequiquam fortibus aptat.
tum galeam Messapi habilem cristisque decoram
induit. excedunt castris et tuta capessunt.

VERG. *Aen.* IX. 342—366.

2. Non equidem hoc studeo, bullatis ut mihi nugis
pagina turgescat, dare pondus idonea fumo.
secreti loquimur: tibi nunc, hortante Camena,
excutienda damus praecordia, quantaque nostrae
pars tua sit, Cornute, animae, tibi, dulcis amice,
ostendisse iuvat: pulsa, dinoscere cautus,
quid solidum crepet et pictae tectoria linguae.
his ego centenas ausim deposcere voces,
ut, quantum mihi te sinuoso in pectore fixi,
voce traham pura, totumque hoc verba resignent,
quod latet arcana non enarrabile fibra.
cum primum pavido custos mihi purpura cessit,
bullaque succinctis Laribus donata pependit;
cum blandi comites totaque impune Subura
permisit sparsisse oculos iam candidus umbo;
cumque iter ambiguum est et vitae nescius error
deducit trepidas ramosa in compita mentes,
me tibi supposui: teneros tu suscipis annos
Socratico, Cornute, sinu; tum fallere sollers
apposita intortos extendit regula mores,
et premitur ratione animus vincique laborat,
artificemque tuo ducit sub pollice vultum.

PERSIUS V. 19—40.

3. Legi tuas litteras, ex quibus intellexi te Caesari nostro valde iure consultum videri. est quod gaudeas te in ista loca venisse, ubi aliquid sapere viderere. quod si in Britanniam quoque profectus esses, profecto nemo in illa tanta insula peritior te fuisset. verum tamen—rideamus licet: sum enim a te invitatus—subinvideo tibi ultro te etiam arcessitum ab eo, ad quem ceteri non propter superbiam eius, sed propter occupationem aspirare non possunt. sed tu in ista epistola nihil mihi scripsisti de tuis rebus, quae mehercule mihi non minori curae sunt quam meae. valde metuo ne frigeas in hibernis: quam ob rem camino luculento utendum censeo—idem Mucio et Manilio placebat—, praesertim qui sagis non abundares. quamquam vos nunc istic satis calere audio: quo quidem nuntio valde mehercule de te timueram. sed tu in re militari multo es cautior quam in advocationibus, qui neque in Oceano natare volueris, studiosissimus homo natandi, neque spectare essedarios, quem antea ne andabatam quidem defraudare poteramus. sed iam satis iocati sumus. ego de te ad Caesarem quam diligenter scripserim, tute scis: quam saepe, ego. sed mehercule iam intermiseram, ne viderer liberalissimi hominis meique amantissimi voluntati erga me diffidere. sed tamen iis litteris, quas proxime dedi, putavi esse hominem commonendum. id feci. quid profecerim facias me velim certiorem et simul de toto statu tuo consiliisque omnibus. scire enim cupio quid agas, quid exspectes, quam longum istum tuum discessum a nobis futurum putes. sic enim tibi persuadeas velim, unum mihi esse solacium, qua re facilius possim pati te esse sine nobis, si tibi esse id emolumento sciam: sin autem id non est, nihil duobus nobis est stultius: me, qui te non Romam attraham, te, qui non huc advoles. una mehercule nostra vel severa vel iocosa congressio pluris erit quam non modo hostes, sed etiam fratres nostri Haedui. qua re omnibus de rebus fac ut quam primum sciam: aut consolando aut consilio aut re iuvero.

Cic. *Ep. ad fam.* vii. 10.

4. Sisenna Statilio Tauro L. Libone consulibus mota orientis regna provinciaeque Romanae, initio apud Parthos orto, qui petitum Roma acceptumque regem, quamvis gentis Arsacidarum, ut externum aspernabantur. is fuit Vonones, obses Augusto datus a Phraate. nam Phraates quamquam depulisset exercitus ducesque Romanos, cuncta venerantium officia ad Augustum verterat partemque prolis firmandae amicitiae miserat, haud perinde nostri metu quam fidei popularium diffisus. post finem Phraatis et sequentium regum ob internas caedes venere in urbem legati a primoribus Parthis, qui Vononem vetustissimum liberorum eius accirent. magnificum id sibi credidit Caesar auxitque opibus. et accepere barbari laetantes, ut ferme ad nova imperia. mox subiit pudor degeneravisse Parthos: petitum alio ex orbe regem, hostium artibus infectum; iam inter provincias Romanas solium Arsacidarum haberi darique. ubi illam gloriam trucidantium Crassum, exturbantium Antonium, si mancipium Caesaris, tot per annos servitutem perpessum, Parthis imperitet? accendebat dedignantes et ipse diversus a maiorum institutis, raro venatu, segni equorum cura; quotiens per urbes incederet, lecticae gestamine, fastuque erga patrias epulas. inridebantur et Graeci comites ac vilissima utensilium anulo clausa. sed prompti aditus, obvia comitas, ignotae Parthis virtutes, nova vitia; et quia ipsorum moribus aliena, perinde odium pravis et honestis.

Tac. *Ann.* ii. 1, 2.

Relate the occasions of contact between Rome and the Parthian power, so far as they are referred to in this passage.

SECTION B.

WEDNESDAY, *May* 28, 1884, 9—12.

TRANSLATE, accompanying each piece with a short paraphrase or statement of the general argument:

1. ΑΘ. εἰ μὲν γὰρ πρὸς τὸ ὅλον ἀεὶ βλέπων πλάττοι τις μετασχηματίζων τὰ πάντα, οἷον ἐκ πυρὸς ὕδωρ ἔμψυχον, καὶ μὴ ξύμπολλα ἐξ ἑνὸς ἢ ἐκ πολλῶν ἕν, πρώτης ἢ δευτέρας ἢ καὶ τρίτης γενέσεως μετειληφότα πλήθεσιν ἄπειρ' ἂν εἴη τῆς μετατιθεμένης κοσμήσεως· νῦν δ' ἔστι θαυμαστὴ ῥᾳστώνη τῷ τοῦ παντὸς ἐπιμελουμένῳ. ΚΛ. πῶς αὖ λέγεις; ΑΘ. ὧδε. ἐπειδὴ κατεῖδεν ἡμῶν ὁ βασιλεὺς ἐμψύχους οὔσας τὰς πράξεις ἁπάσας καὶ πολλὴν μὲν ἀρετὴν ἐν αὐταῖς οὖσαν, πολλὴν δὲ κακίαν, ἀνώλεθρον δὲ ὂν τὸ γενόμενον, ἀλλ' οὐκ αἰώνιον, ψυχὴν καὶ σῶμα, καθάπερ οἱ κατὰ νόμον ὄντες θεοί—γένεσις γὰρ οὐκ ἄν ποτε ἦν ζώων ἀπολομένου τούτοιν θατέρου—καὶ τὸ μὲν ὠφελεῖν ἀεὶ πεφυκός, ὅσον ἀγαθὸν ψυχῆς, διενοήθη, τὸ δὲ κακὸν βλάπτειν· ταῦτα πάντα ξυνιδὼν ἐμηχανήσατο, ποῦ κείμενον ἕκαστον τῶν μερῶν νικῶσαν ἀρετήν, ἡττωμένην δὲ κακίαν ἐν τῷ παντὶ παρέχοι μάλιστ' ἂν καὶ ῥᾷστα καὶ ἄριστα. μεμηχάνηται δὴ πρὸς πᾶν τοῦτο τὸ ποῖόν τι γιγνόμενον ἀεὶ ποίαν ἕδραν δεῖ μεταλαμβάνον οἰκίζεσθαι καὶ τίνας ποτὲ τόπους· τῆς δὲ γενέσεως τὸ ποίου τινὸς ἀφῆκε ταῖς βουλήσεσιν ἑκάστων ἡμῶν τὰς αἰτίας. ὅπῃ γὰρ ἂν ἐπιθυμῇ καὶ ὁποῖός τις ὢν τὴν ψυχήν, ταύτῃ σχεδὸν ἑκάστοτε καὶ τοιοῦτος γίγνεται ἅπας ἡμῶν ὡς τὸ πολύ.

PLATO *Laws* 903 E—904 C.

2. καὶ πάντα γα μὰν τὰ γιγνωσκόμενα ἀριθμὸν ἔχοντι. οὐ γὰρ ὁτιῶν οἷόν τε οὐθὲν οὔτε νοηθῆμεν οὔτε γνωσθῆμεν ἄνευ τούτω. ὅ γα μὰν ἀριθμὸς ἔχει δύο μὲν ἴδια εἴδεα, περισσὸν καὶ ἄρτιον, τρίτον δὲ ἀπ' ἀμφοτέρων μιχθέντων ἀρτιοπέρισσον. ἑκατέρω δὲ τῶ εἴδεος πολλαὶ μορφαί, ἂν ἕκαστα ὡσαύτως μερίζεται. περὶ δὲ φύσιος καὶ ἁρμονίας ὧδε ἔχει. ἁ μὲν ἐστὼ τῶν πραγμάτων ἀίδιος ἔσσα καὶ αὐτὰ μόνα φύσις θεία ἐντὶ καὶ οὐκ ἀνθρωπίναν ἐνδέχεται γνῶσιν, πλάν γα ἢ ὅτι οὐχ οἷόν τε ἧς οὐθενὶ τῶν ἐόντων καὶ γιγνωσκομένων ὑφ' ἁμῶν γνωσθῆμεν, μὴ ὑπαρχοίσας τᾶς ἐστοῦς τῶν πραγμάτων, ἐξ ὧν ξυνέστα ὁ κόσμος, τῶν τε περαινόντων καὶ τῶν ἀπείρων. ἐπεὶ δὲ ταὶ ἀρχαὶ ὑπᾶρχον οὐχ ὁμοῖαι οὐδ' ὁμόφυλοι ἔσσαι, ἤδη ἀδύνατον ἧς κα αὐταῖς κοσμηθῆμεν, αἰ μὴ ἁρμονία ἐπεγένετο, ᾧτινιῶν τρόπῳ ἐγένετο. τὰ μὲν ὧν ὁμοῖα καὶ ὁμόφυλα ἁρμονίας οὐθὲν ἐπεδέοντο, τὰ δὲ ἀνομοῖα μηδὲ ὁμόφυλα μηδὲ ἰσοτελῆ ἀνάγκᾳ τᾷ τοιαύτᾳ ἁρμονίᾳ συγκεκλεῖσθαι, αἰ μέλλοντι ἐν κόσμῳ κατέχεσθαι.

pseudo-PHILOLAOS apud STOBAEUM *ecl. phys.* I 456.

3. οἱ μὲν οὖν τοῦτον τὸν τρόπον περὶ κούφου καὶ βαρέος διώρισαν· τοῖς δ' οὐχ ἱκανὸν ἔδοξεν οὕτω διελεῖν, ἀλλὰ καίπερ ὄντες ἀρχαιότεροι τῆς νῦν ἡλικίας καινοτέρως ἐνόησαν περὶ τῶν νῦν λεχθέντων. φαίνεται γὰρ ἔνια τὸν ὄγκον μὲν ἐλάττω τῶν σωμάτων, ὄντα δὲ βαρύτερα. δῆλον οὖν ὡς οὐχ ἱκανὸν τὸ φάσκειν ἐξ ἴσων συγκεῖσθαι τῶν πρώτων τὰ ἰσοβαρῆ· ἴσα γὰρ ἂν ἦν τὸν ὄγκον. τὰ δὲ πρῶτα καὶ ἄτομα τοῖς μὲν ἐπίπεδα λέγουσιν ἐξ ὧν συνέστηκε τὰ βάρος ἔχοντα τῶν σωμάτων, ἄτοπον τὸ φάναι· τοῖς δὲ στερεὰ μᾶλλον ἐνδέχεται λέγειν τὸ μεῖζον εἶναι βαρύτερον αὐτῶν. τῶν δὲ συνθέτων, ἐπειδήπερ οὐ φαίνεται τοῦτον ἔχειν ἕκαστον τὸν τρόπον, ἀλλὰ πολλὰ βαρύτερα ὁρῶμεν ἐλάττω τὸν ὄγκον ὄντα, καθάπερ ἐρίου χαλκόν, ἕτερον τὸ αἴτιον οἴονταί τε καὶ λέγουσιν ἔνιοι· τὸ γὰρ κενὸν ἐμπεριλαμβανόμενον κουφίζειν τὰ σώματά φασι καὶ ποιεῖν ἔστιν ὅτε τὰ μείζω κουφότερα· πλεῖον γὰρ ἔχειν κενόν. διὰ τοῦτο γὰρ καὶ τὸν ὄγκον εἶναι μείζω συγκείμενα πολλάκις ἐξ ἴσων στερεῶν ἢ καὶ ἐλαττόνων. ὅλως δὲ καὶ παντὸς αἴτιον εἶναι τοῦ κουφοτέρου τὸ πλεῖον ἐνυπάρχειν κενόν. λέγουσι μὲν οὖν τοῦτον τὸν τρόπον, ἀνάγκη δὲ προσθεῖναι τοῖς οὕτω διορίζουσι μὴ μόνον τὸ κενὸν ἔχειν πλεῖον, ἂν ᾖ κουφότερον, ἀλλὰ καὶ τὸ στερεὸν ἔλαττον· εἰ γὰρ ὑπερέξει τῆς τοιαύτης ἀναλογίας, οὐκ ἔσται κουφότερον. διὰ γὰρ τοῦτο καὶ τὸ πῦρ εἶναί φασι κουφότατον, ὅτι πλεῖστον ἔχει κενόν. συμβήσεται οὖν μικροῦ πυρὸς πολὺν χρυσὸν πλεῖον ἔχοντα τὸ κενὸν εἶναι κουφότερον, εἰ μὴ καὶ στερεὸν ἕξει πολλαπλάσιον· ὥστε τοῦτο λεκτέον.

ARISTOTLE *de caelo* IV 2 308ᵇ 28.

4. quod enim dicantur adsensiones fieri causis antepositis, id quale sit facile a se explicari putat. nam quamquam adsensio non possit fieri nisi commota viso, tamen, quum id visum proximam causam habeat, non principalem, hanc habet rationem, ut Chrysippus volt, quam dudum diximus, non, ut illa quidem fieri possit nulla vi extrinsecus excitata—necesse est enim adsensionem viso commoveri—, sed revertitur ad cylindrum et ad turbinem suum, quae moveri incipere nisi pulsa non possunt. id autem quum accidit, suapte natura, quod superest, et cylindrum volvi et versari turbinem putat. ut igitur, inquit, qui protrusit cylindrum, dedit ei principium motionis, volubilitatem autem non dedit, sic visum obiectum imprimet illud quidem et quasi signabit in animo suam speciem, sed adsensio nostra erit in potestate, eaque, quem ad modum in cylindro dictum est, extrinsecus pulsa, quod reliquum est, suapte vi et natura movebitur. quod si aliqua res efficeretur sine causa antecedente, falsum esset omnia fato fieri: sin omnibus, quaecumque fiunt, veri simile est causam antecedere, quid adferri poterit cur non omnia fato fieri fatendum sit? modo intelligatur quae sit causarum distinctio ac dissimilitudo.

CICERO *de fato* c. 18 §§ 42, 43.

WEDNESDAY, *May* 28, 1884. 1.30—4.30.

[*You are recommended to attempt, at least partially,* **not less than six** *of these questions, of which the last should be one.*]

I. TRANSLATE:

μεμιγμένη γὰρ οὖν ἡ τοῦδε τοῦ κόσμου γένεσις ἐξ ἀνάγκης τε καὶ νοῦ συστάσεως ἐγεννήθη· νοῦ δὲ ἀνάγκης ἄρχοντος τῷ πείθειν αὐτὴν τῶν γιγνομένων τὰ πλεῖστα ἐπὶ τὸ βέλτιστον ἄγειν, ταύτῃ κατὰ ταῦτά τε δι' ἀνάγκης ἡττωμένης ὑπὸ πειθοῦς ἔμφρονος οὕτω κατ' ἀρχὰς ξυνίστατο τόδε τὸ πᾶν. εἴ τις οὖν ᾗ γέγονε, κατὰ ταῦτα ὄντως ἐρεῖ, μικτέον καὶ τὸ τῆς πλανωμένης εἶδος αἰτίας, ᾗ φέρειν πέφυκεν.

Timaeus 48 A.

Explain this passage very carefully, drawing out its full metaphysical import. State precisely how you understand *τὸ τῆς πλανωμένης εἶδος αἰτίας*. Compare Plato's notion of *ἀνάγκη* with that of Demokritos. How far do you regard Plato's *ἀνάγκη* as an independent force? What is the meaning of *κατ' ἀρχάς*?

II. (*α*) *ὁ αὐτὸς δὴ λόγος καὶ περὶ τῆς τὰ πάντα δεχομένης σώματα φύσεως ταὐτὸν αὐτὴν ἀεὶ προσρητέον· ἐκ γὰρ τῆς ἑαυτῆς τὸ παράπαν οὐκ ἐξίσταται δυνάμεως.*

Timaeus 50 B.

(*β*) *τρίτον δὲ αὖ γένος ὂν τὸ τῆς χώρας ἀεί, φθορὰν οὐ προσδεχόμενον, ἕδραν δὲ παρέχον ὅσα ἔχει γένεσιν πᾶσιν, αὐτὸ δὲ μετ' ἀναισθησίας ἁπτὸν λογισμῷ τινὶ νόθῳ, μόγις πιστόν.* *ibid.* 52 A.

Expound Plato's conception of *ἡ τὰ πάντα δεχομένη σώματα φύσις*. Determine accurately its relation to *ταὐτὸν* and *θάτερον*. Show how Plato came to identify his *ὑποδοχὴ* with *χώρα*. Examine fully the phrase *μετ' ἀναισθησίας ἁπτὸν λογισμῷ τινὶ νόθῳ, μόγις πιστόν*.

τὰ δὲ εἰσιόντα καὶ ἐξιόντα τῶν ὄντων ἀεὶ μιμήματα, τυπωθέντα ἀπ' αὐτῶν τρόπον τινὰ δύσφραστον καὶ θαυμαστόν. Explain this. What are the *εἰσιόντα καὶ ἐξιόντα*? What answer does the *Timaeus* offer to the problem concerning the connexion of the ideal and material worlds?

III. (*α*) *ἣν* [sc. *τὴν τῶν εἰκότων λόγων ἰδέαν*] *ὅταν τις ἀναπαύσεως ἕνεκα τοὺς περὶ τῶν ὄντων ἀεὶ καταθέμενος λόγους τοὺς γενέσεως πέρι διαθεώμενος εἰκότας ἀμεταμέλητον ἡδονὴν κτᾶται, μέτριον ἂν ἐν τῷ βίῳ παιδιὰν καὶ φρόνιμον ποιοῖτο.*

Timaeus 59 C.

(*β*) *διὸ χρὴ δύ' αἰτίας εἴδη διορίζεσθαι, τὸ μὲν ἀναγκαῖον τὸ δὲ θεῖον, καὶ τὸ μὲν θεῖον ἐν ἅπασι ζητεῖν κτήσεως ἕνεκα εὐδαίμονος βίου, καθ' ὅσον ἡμῶν ἡ φύσις ἐνδέχεται, τὸ δὲ ἀναγκαῖον ἐκείνων χάριν, λογιζόμενον ὡς ἄνευ τούτων οὐ δυνατὰ αὐτὰ ἐκεῖνα ἐφ' οἷς σπουδάζομεν μόνα κατανοεῖν οὐδ' αὖ λαβεῖν οὐδ' ἄλλως πως μετασχεῖν.* *ibid.* 68 E.

Putting these two passages together determine the exact place and importance assigned by Plato in his later period to natural science, considering the question in its bearings on his metaphysical principles. Compare his position regarding the study of phenomena with that of (*α*) Parmenides, (*β*) Aristotle, (*γ*) with Plato's own position in the *republic*.

What are the chief dynamical forces by which Plato explains the various operations of nature? Show in one or two cases how he employs them.

IV. *ὥστε συνέβαινεν αὐτοῖς σχεδὸν τῷ αὐτῷ λόγῳ πάντων ἰδέας εἶναι τῶν καθόλου λεγομένων.....ἔτι δὲ οἱ ἀκριβέστατοι τῶν λόγων οἱ μὲν τῶν πρός τι ποιοῦσιν ἰδέας, ὧν οὔ φασιν εἶναι καθ' αὐτὸ γένος.* *metaph.* M iv.

Explain and account for these two statements.

ἔτι δὲ κατὰ μὲν τὴν ὑπόληψιν καθ' ἣν εἶναί φαμεν τὰς ἰδέας, οὐ μόνον τῶν οὐσιῶν ἔσται εἴδη ἀλλὰ πολλῶν καὶ ἑτέρων. *metaph.* A ix. Explain this.

μετὰ τοῦτο ἐν τοῖς ὕδασι τά τε τῶν ἀνθρώπων καὶ τὰ τῶν ἄλλων εἴδωλα, ὕστερον δὲ αὐτά· ἐκ δὲ τούτων τὰ ἐν τῷ οὐρανῷ καὶ αὐτὸν τὸν οὐρανὸν νύκτωρ ἂν ῥᾷον θεάσαιτο, προσβλέπων τὸ τῶν ἄστρων καὶ σελήνης φῶς, ἢ μεθ' ἡμέραν τὸν ἥλιον καὶ τὸ τοῦ ἡλίου. *republic* 516 A.

How much of this do you conceive would be retained in Plato's maturest ontology? Give your reasons.

V. "In so far as this philosophic abstraction from ordinary human interests can never be complete, since the philosopher must still live and act in the concrete sensible world, the Socratic identification of wisdom and virtue is fully maintained by Plato." Discuss this remark. In what sense would Sokrates and Plato respectively use the expressions *διδακτὸν ἀρετή, οὐδεὶς ἑκὼν ἄδικος*? Determine the ethical relation to Sokrates of (*α*) Plato, (*β*) Aristotle, (*γ*) Stoicism.

VI. (*a*) *ἐκ τούτων οὖν φανερὸν ὅτι τῶν φύσει ἡ πόλις ἐστί, καὶ ὅτι ὁ ἄνθρωπος φύσει πολιτικὸν ζῷόν ἐστι, καὶ ὁ ἄπολις διὰ φύσιν καὶ οὐ διὰ τύχην ἤτοι φαῦλός ἐστιν ἢ κρείττων ἢ ἄνθρωπος.* *politics* I ii 12. What does Aristotle intend by this doctrine? What were the views against which it was necessary to assert it?

(*b*) *φανερὸν τοίνυν ὡς οὐ πέφυκε μίαν οὕτως εἶναι τὴν πόλιν ὥσπερ λέγουσί τινες, καὶ τὸ λεχθὲν ὡς μέγιστον ἀγαθὸν ἐν ταῖς πόλεσιν ὅτι τὰς πόλεις ἀναιρεῖ.* *ib.* II ii 7. What is the doctrine of the unity of the state here criticized? What reply could be made to the objections?

VII. Translate, with commentary:

(1) *εἰ μὲν μηδὲν ἔστι, περὶ τούτου τί ἂν λέγοιτο ὡς ἐόντος τινός; εἰ δέ τι ἔστι, ἤτοι γινόμενόν ἐστι ἢ ἀεὶ ἐόν. ἀλλ' εἰ γινόμενον, ἤτοι ἐξ ἐόντος ἢ ἐκ μὴ ἐόντος· ἀλλ' οὔτε ἐκ μὴ ἐόντος οἷόν τε γίνεσθαί τι, οὔτε ἄλλο μὲν οὐδὲν ἐόν, πολλῷ δὲ μᾶλλον τὸ ἁπλῶς ἐόν· οὔτε ἐκ τοῦ ἐόντος· εἴη γὰρ ἂν οὕτω καὶ οὐ γίνοιτο. οὐκ ἄρα γινόμενόν ἐστι τὸ ἐόν· αἰεὶ ἐὸν ἄρα ἐστί.* MELISSOS.

(2) *καθόλου γὰρ οἱ λέγοντες ἐξαπατῶσιν ἑαυτοὺς ὅτι τὸ εὖ ἔχειν τὴν ψυχὴν ἀρετή, ἢ τὸ ὀρθοπραγεῖν, ἤ τι τῶν τοιούτων· πολὺ γὰρ ἄμεινον λέγουσιν οἱ ἐξαριθμοῦντες τὰς ἀρετάς, ὥσπερ Γοργίας, τῶν οὕτως ὁριζομένων.* *politics* I xiii 10.

(3) Any TWO of the following passages:

(*α*) *ἀλλ' ἡ ἐξαίφνης αὕτη φύσις ἄτοπός τις ἐγκάθηται μεταξὺ τῆς κινήσεώς τε καὶ στάσεως, ἐν χρόνῳ οὐδενὶ οὖσα, καὶ εἰς ταύτην δὴ καὶ ἐκ ταύτης τό τε κινούμενον μεταβάλλει ἐπὶ τὸ ἑστάναι καὶ τὸ ἑστὸς ἐπὶ τὸ κινεῖσθαι. καὶ τὸ ἓν δή, εἴπερ ἕστηκέ τε καὶ κινεῖται, μεταβάλλοι ἂν ἐφ' ἑκάτερα· μόνως γὰρ ἂν οὕτως ἀμφοτέρως ποιεῖ· μεταβάλλον δ' ἐξαίφνης μεταβάλλει, καὶ ὅτε μεταβάλλει, ἐν οὐδενὶ χρόνῳ ἂν εἴη.* *Parmenides* 156 D.

(*β*) *ταῦτα δ' ἐν τῷ κενῷ φέρεσθαι (κενὸν γὰρ εἶναι), ποιεῖν δὲ καὶ πάσχειν ᾗ τυγχάνουσιν ἁπτόμενα· ταύτῃ γὰρ οὐχ ἓν εἶναι. καὶ συντιθέμενα δὲ καὶ περιπλεκόμενα γεννᾶν· ἐκ δὲ τοῦ κατ' ἀληθείαν ἑνὸς οὔτ' ἂν γενέσθαι πλῆθος, οὐδ' ἐκ τῶν ἀληθῶς πολλῶν ἕν, ἀλλ' εἶναι τοῦτ' ἀδύνατον· ἀλλ' ὥσπερ Ἐμπεδοκλῆς καὶ τῶν ἄλλων τινές φασι πάσχειν διὰ πόρων, οὕτω πᾶσαν ἀλλοίωσιν καὶ πᾶν τὸ πάσχειν τοῦτον γίνεσθαι τὸν τρόπον.* *de gen.* 325ᵃ 31.

(*γ*) *τί οὖν τὸ αἴτιον τοῦ ἐξ ἀνθρώπου ἄνθρωπον ἢ ἀεὶ ἢ ὡς ἐπὶ τὸ πολύ; ἢ καὶ ἐὰν ὡδὶ συντεθῇ ὁστοῦν; οὐ γὰρ ὅπως ἔτυχε συνελθόντων οὐδὲν γίγνεται, καθάπερ ἐκεῖνός φησιν, ἀλλὰ λόγῳ τινί. τί οὖν τούτων αἴτιον; οὐ γὰρ δὴ πῦρ γε ἢ γῆ. ἀλλὰ μὴν οὐδ' ἡ φιλία καὶ τὸ νεῖκος· συγκρίσεως γὰρ μόνον, τὸ δὲ διακρίσεως αἴτιον. τοῦτο δ' ἐστὶν ἡ οὐσία ἡ ἑκάστου, ἀλλ' οὐ μόνον μίξις τε διάλλαξίς τε μιγέντων, ὥσπερ ἐκεῖνός φησιν. τύχη δ' ἐπὶ τούτων ὀνομάζεται, ἀλλ' οὐ λόγος· ἔστι γὰρ μιχθῆναι ὡς ἔτυχεν. τῶν δὴ φύσει ὄντων αἴτιον τὸ οὕτως ἔχειν, καὶ ἡ ἑκάστου φύσις αὕτη, περὶ ἧς οὐδὲν λέγει. οὐδὲν ἄρα περὶ φύσεως λέγει.* *de gen.* 333ᵇ 7.

(*δ*) *καίτοι τά γε στοιχεῖα διακρίνει οὐ τὸ νεῖκος, ἀλλ' ἡ φιλία τὰ φύσει πρότερα τοῦ θεοῦ.* *de gen.* 333ᵇ 20. *ἀλλὰ δὴ καὶ σὰρξ ἐξ αὐτῶν γίνεται καὶ μυελός· ταῦτα δὴ γίνεται πῶς; ἐκείνοις τε γὰρ τοῖς λέγουσιν ὡς Ἐμπεδοκλῆς τίς ἔσται τρόπος; ἀνάγκη γὰρ σύνθεσιν εἶναι καθάπερ ἐκ πλίνθων καὶ λίθων τοῖχος· καὶ τὸ μῖγμα δὲ τοῦτο ἐκ σωζομένων μὲν ἔσται τῶν στοιχείων, κατὰ μικρὰ δὲ παρ' ἄλληλα συγκειμένων.* *ib.* 334ᵃ 25.

THURSDAY, *May* 29, 1884. 9—12.

[*You are recommended to attempt, at least partially,* **not less than six** *of these questions, of which the last should be one.*]

I. *πρῶτον μὲν οὖν οὐ καλῶς τὸ λέγειν τὴν ψυχὴν μέγεθος εἶναι.* *de anima* I iii 12.

State fully and explain the psychological theory to which the above remark is meant to refer, comparing it with other theories which form the soul *ἐκ τῶν στοιχείων*. Give the substance of Aristotle's criticisms upon it.

ἀλλὰ μὴν οὐδ' ὅτι βέλτιον λέγεται· καίτοι γ' ἐχρῆν διὰ τοῦτο τὸν θεὸν κύκλῳ ποιεῖν φέρεσθαι τὴν ψυχήν, ὅτι βέλτιον αὐτῇ τὸ κινεῖσθαι ἢ μένειν, κινεῖσθαι δ' οὕτως ἢ ἄλλως. *ibid.* § 21.

"Aristotle is here confuting Plato out of his own mouth. The *Phaedo* is full of passages which regard body as the prison merely of the mind, and regard its deliverance from its fetters as an event devoutly to be wished for. And so far, the doctrine of the world-soul in the *Timaeus* is, says Aristotle, inconsistent with the psychology of the *Phaedo*."

Examine this remark.

Comment generally upon Aristotle's treatment of the subject.

II. Translate and fully explain:

(α) *καθόλου μὲν οὖν εἴρηται τί ἐστιν ἡ ψυχή· οὐσία γὰρ ἡ κατὰ τὸν λόγον. τοῦτο δὲ τὸ τί ἦν εἶναι τῷ τοιῷδὶ σώματι, καθάπερ εἴ τι τῶν ὀργάνων φυσικὸν ἦν σῶμα, οἷον πέλεκυς· ἦν μὲν γὰρ ἂν τὸ πελέκει εἶναι ἡ οὐσία αὐτοῦ, καὶ ἡ ψυχὴ τοῦτο· χωρισθείσης γὰρ ταύτης οὐκ ἂν ἔτι πέλεκυς ἦν, ἀλλ' ἢ ὁμωνύμως, νῦν δ' ἐστὶ πέλεκυς· οὐ γὰρ τοιούτου σώματος τὸ τί ἦν εἶναι καὶ ὁ λόγος ἡ ψυχή.* *de anima* II i 8.

(β) *ὡς μὲν οὖν ἡ τμῆσις καὶ ἡ ὅρασις, οὕτω καὶ ἡ ἐγρήγορσις ἐντελέχεια, ὡς δὲ ἡ ὄψις καὶ ἡ δύναμις τοῦ ὀργάνου, ἡ ψυχή.* *ibid.* § 11.

Compare Aristotle's theory of soul with Plato's in regard to the relation of individual intelligences to the absolute mind.

ἡ μὲν γὰρ αἴσθησις ἀλλοίωσίς τις εἶναι δοκεῖ. Explain the nature of this *ἀλλοίωσις*. Draw a comparison, so far as you are able, between Aristotle's theory of perception and that of Plato.

III. (α) *νῦν δὲ περὶ ψυχῆς τὰ λεχθέντα συγκεφαλαιώσαντες εἴπωμεν πάλιν ὅτι ἡ ψυχὴ τὰ ὄντα πώς ἐστι πάντα.* *de anima* III viii.

Expound the psychological theory indicated herein. Do you think that Plato might have used the words above quoted? if so, state and distinguish his view from Aristotle's.

ἡ ψυχὴ ὥσπερ ἡ χείρ ἐστιν. Draw out this analogy.

(β) *δεῖ δ' οὕτως ὥσπερ ἐν γραμματείῳ ᾧ μηθὲν ὑπάρχει ἐντελεχείᾳ γεγραμμένον· ὅπερ συμβαίνει ἐπὶ τοῦ νοῦ.* Explain this from Aristotle's standpoint and compare it with any similar theory that you know.

IV. *τὸ νοητὸν κινεῖ οὐ κινούμενον.*

ἔστι τι κινοῦν αὐτὸ ἀκίνητον ὄν, ἐνεργείᾳ ὄν. *metaph.* Λ vii.

Explain this conception of Aristotle's, and compare it carefully with Plato's *αὐτοκίνητος ἀρχὴ κινήσεως*. What objections does Aristotle urge against the latter? How might a Platonist reply?

V. Carefully explain the following:

(α) *καὶ ταύτῃ ἄρα πῃ ἡ τοῦ οἰκείου τε καὶ ἑαυτοῦ ἕξις τε καὶ πρᾶξις δικαιοσύνη ἂν ὁμολογοῖτο.* *republic* 433 E.

(β) *τελεία δ' ἐστὶν ἀρετή, ὅτι τῆς τελείας ἀρετῆς χρῆσις, καὶ τελεία μάλιστα, ὅτι ὁ ἔχων αὐτὴν καὶ πρὸς ἕτερον δύναται τῇ ἀρετῇ χρῆσθαι, ἀλλ' οὐ μόνον καθ'*

αὐτόν. διὰ δὲ τὸ αὐτὸ τοῦτο καὶ ἀλλότριον ἀγαθὸν δοκεῖ εἶναι ἡ δικαιοσύνη μόνη τῶν ἀρετῶν, ὅτι πρὸς ἕτερόν ἐστιν. *eth. nic.* V i 15.

Examine and compare the two conceptions of justice here presented. How far do they correspond with the ordinary acceptation of the term in Greece? Quote the definition of τὸ κατὰ φύσιν δίκαιον given by Epicurus and investigate the relations of his theory of justice to the foregoing.

VI. Explain: Arcesilas negabat esse quicquam quod sciri posset, ne illud quidem ipsum quod Socrates sibi reliquisset. CIC. *ac.* I 45.

Discuss the propriety of applying the term sceptic to Sokrates. Compare his attitude in this regard with that of any of his contemporaries or successors. Point out any fundamental differences observable between the views of the later Greek Sceptics and modern philosophical scepticism.

VII. (*a*) Translate with commentary:

ὥστε παραθεωροῦντας ποσαχῶς παρ' ἡμῖν τὸ ὅμοιον γίνεται, αἰτιολογητέον ὑπέρ τε τῶν μετεώρων καὶ παντὸς τοῦ ἀδήλου, καταφρονοῦντας τῶν οὔτε τὸ μοναχῶς ἔχον ἢ γινόμενον γνωριζόντων, οὔτε τὸ πλεοναχῶς συμβαῖνον κατὰ τὴν ἐκ τῶν ἀποστημάτων φαντασίαν παραδιδόντων. DIOG. LAERT. X 80.

Exemplify the distinction implied in the words spaced and the application of these canons to physical researches.

"Epicureanism was the great scientific school of antiquity and the system is a genuine attempt at a scientific explanation of the world." Discuss this.

(*β*) Explain: ἡ μὲν γὰρ ἀταραξία καὶ ἀπονία καταστηματικαί εἰσιν ἡδοναί, ἡ δὲ χαρὰ καὶ εὐφροσύνη κατὰ κίνησιν ἐνεργείᾳ βλέπονται. DIOG. LAERT. X 136.

Determine the importance of this distinction and its influence upon Epicurean ethics.

VIII. Translate with commentary:

(1) ἔοικε δ' ὁ μὲν Ἡρακλείτου λόγος, λέγων πάντα εἶναι καὶ μὴ εἶναι, ἅπαντα ἀληθῆ ποιεῖν, ὁ δ' Ἀναξαγόρου εἶναί τι μεταξὺ τῆς ἀντιφάσεως, ὥστε πάντα ψευδῆ. ὅταν γὰρ μιχθῇ, οὔτ' ἀγαθὸν οὔτ' οὐκ ἀγαθὸν τὸ μῖγμα, ὥστ' οὐθὲν εἰπεῖν ἀληθές.
metaph. Γ vii 1012ᵃ 24.

(2) εἰ δὲ...ἐν τῷ κατ' ἀρετὴν βιοῦν μόνον ἐστὶ τὸ εὐδαιμόνως, τῶν ἄλλων, φησίν, οὐδὲν ὄντων πρὸς ἡμᾶς οὐδ' εἰς τοῦτο συνεργούντων· οὐ μόνον οὐκ ἐστιν ἀδιάφορος ἡ φύσις, ἀλλ' ἀνόητος καὶ ἀπόπληκτος, οἰκειοῦσα ἡμᾶς πρὸς τὰ μηδὲν πρὸς ἡμᾶς· ἀνόητοι δὲ καὶ ἡμεῖς, εὐδαιμονίαν ἡγούμενοι τὸ τῇ φύσει ὁμολογεῖν ἀγούσῃ πρὸς τὰ μηδὲν συνεργοῦντα πρὸς εὐδαιμονίαν. καίτοι τι μᾶλλόν ἐστι κατὰ τὴν κοινὴν ἔννοιαν ἢ καθάπερ τὰ αἱρετὰ πρὸς τὸ ὠφελίμως, οὕτω τὰ κατὰ φύσιν πρὸς τὸ ζῆν κατὰ φύσιν; οἱ δ' οὐχ οὕτω λέγουσιν, ἀλλὰ τὸ ζῆν κατὰ φύσιν τέλος εἶναι τιθέμενοι, τὰ κατὰ φύσιν ἀδιάφορα εἶναι νομίζουσιν. PLUTARCH *de comm. not.* 5.

(3) any TWO of the following passages:

(*a*) τὸν μὲν οὖν ποιητὴν καὶ πατέρα τοῦδε τοῦ παντὸς εὑρεῖν τε ἔργον καὶ εὑρόντα εἰς πάντας ἀδύνατον λέγειν· τόδε δ' οὖν πάλιν ἐπισκεπτέον περὶ αὐτοῦ πρὸς πότερον τῶν παραδειγμάτων ὁ τεκταινόμενος αὐτὸν ἀπειργάζετο, πότερον πρὸς τὸ κατὰ ταὐτὰ καὶ ὡσαύτως ἔχον, ἢ πρὸς τὸ γεγονός. *Timaeus* 28 C.

(*β*) εἰκὼ δ' ἐπενόει κινητόν τινα αἰῶνος ποιῆσαι, καὶ διακοσμῶν ἅμα οὐρανὸν ποιεῖ μένοντος αἰῶνος ἐν ἑνὶ κατ' ἀριθμὸν ἰοῦσαν αἰώνιον εἰκόνα. *ib.* 37 D.

(*γ*) καὶ δὴ καὶ τέλος περὶ τοῦ παντὸς νῦν ἤδη τὸν λόγον ἡμῖν φῶμεν ἔχειν· θνητὰ γὰρ καὶ ἀθάνατα ζῷα λαβὼν καὶ συμπληρωθεὶς ὅδε ὁ κόσμος οὕτω ζῷον ὁρατὸν τὰ ὁρατὰ περιέχον, εἰκὼν τοῦ ποιητοῦ[2], θεὸς αἰσθητός, μέγιστός τε καὶ ἄριστος κάλλιστός τε καὶ τελεώτατος γέγονεν, εἷς οὐρανὸς ὅδε μονογενὴς ὤν. *ib.* 92 C.

[2] al. νοητοῦ: discuss the reading.

(*δ*) Δημόκριτος δὲ καὶ Λεύκιππος ποιήσαντες τὰ σχήματα τὴν ἀλλοίωσιν καὶ τὴν γένεσιν ἐκ τούτων ποιοῦσι, διακρίσει μὲν καὶ συγκρίσει γένεσιν καὶ φθοράν, τάξει δὲ καὶ θέσει ἀλλοίωσιν. ἐπεὶ δ' ᾤοντο τἀληθὲς ἐν τῷ φαίνεσθαι, ἐναντία δὲ καὶ ἄπειρα τὰ φαινόμενα, τὰ σχήματα ἄπειρα ἐποίησαν, ὥστε ταῖς μεταβολαῖς τοῦ συγκειμένου τὸ αὐτὸ ἐναντίον δοκεῖν ἄλλῳ καὶ ἄλλῳ, καὶ ὅλως ἕτερον φαίνεσθαι ἑνὸς μετακινηθέντος· ἐκ τῶν αὐτῶν γὰρ τραγῳδία καὶ κωμῳδία γίνεται γραμμάτων.
de gen. 315ᵇ 6.

THURSDAY, *May* 29, 1884. 1.30—4.30.

[*You are recommended to attempt, at least partially,* **not less than six** *of these questions, of which the last should be one.*]

I. "PLATO finds a solution of all the difficulties in the first part of the *Parmenides* in his theory of the relation between idea and phenomenon, as that relation is determined by the first principle of his philosophy, that in ideas alone consists true reality (*ὄντως ὄν*). Thus phenomena are deprived of all independent existence: no longer separate entities, they are simply the idea itself in the form of not-being: the idea is not inherent in the phenomenon, on the contrary phenomena inhere in the ideas."

Take the several difficulties here referred to and decide whether the solution indicated by Zeller is satisfactory. Compare these difficulties with any objections against the ideas advanced in other Platonic dialogues. Does it appear to you that the theory ever came to be practically ignored by Plato? *οἱ δ' ἀπὸ Ζήνωνος Στωϊκοὶ ἐννοήματα ἡμέτερα τὰς ἰδέας ἔφασαν.* Discuss this interpretation on Platonic principles, taking account of any peculiarities in the manner in which it has been maintained subsequently to the Stoics.

II. (*α*) *νῦν δὲ λέγεται ὡς ὄντος τοῦ ἑνὸς ὥσπερ πυρὸς ἢ ὕδατος ὁμοιομεροῦς. ἀλλὰ δῆλον ὅτι, εἴπερ ἔστι τι ἓν αὐτὸ καὶ τοῦτό ἐστιν ἀρχή, πλεοναχῶς λέγεται τὸ ἕν.* Explain this objection. Does it apply to the *Parmenides*?

(*β*) *ὡς ἐξ ἑνὸς μὲν καὶ ἐκ πολλῶν ὄντων τῶν ἀεὶ λεγομένων εἶναι πέρας δὲ καὶ ἀπειρίαν ἐν αὐτοῖς ξύμφυτον ἐχόντων.* Shew under what conditions and in what sense this conclusion can be inferred from the *Parmenides*.

Determine from Plato's standpoint the nature of the Eleatic One (*e.g.* is it an idea?). What do you understand by the One dialectically treated in the latter half of the *Parmenides*? Characterize (*a*) the premisses (*b*) the deductive processes there applied, and discuss their validity, justifying your answer throughout by quotations from the antinomies.

III. *ὁρῶμεν δὲ τὸ αὐτὸ σῶμα συνεχὲς ὂν ὅτε μὲν ὑγρὸν ὅτε δὲ πεπηγός, οὐ διαιρέσει καὶ συνθέσει τοῦτο παθόν, οὐδὲ τροπῇ καὶ διαθιγῇ, καθάπερ λέγει Δημόκριτος.*

Classify the various physical theories reviewed in the *de generatione*, and shew clearly how in each case the fact above cited is accounted for. Give also in detail the real or supposed deficiencies which Aristotle discovers in such explanations.

IV. *ἀλλ' οἱ μὲν ποιοῦντες μίαν ὕλην παρὰ τὰ εἰρημένα, ταύτην δὲ σωματικὴν καὶ χωριστήν, ἁμαρτάνουσιν· ἀδύνατον γὰρ ἄνευ ἐναντιώσεως εἶναι τὸ σῶμα τοῦτο αἰσθητὸν ὄν. ὡς δ' ἐν τῷ Τιμαίῳ γέγραπται, οὐδένα ἔχει διορισμόν· οὐ γὰρ εἴρηκε σαφῶς τὸ πανδεχές, εἰ χωρίζεται τῶν στοιχείων. de gen.* 329ᵃ 8.

Carefully explain these objections. How might a Platonist reply?

Give a concise history of the doctrine of 'elements' or 'simple bodies' down to Aristotle's time, noticing particularly the defects he has remarked in the form of the doctrine put forward by his predecessors and the modifications with which he has adopted it himself.

V. *ἀλλ' οὔτ' ἀπολέσθαι τὰ κακὰ δυνατόν, ὦ Θεόδωρε· ὑπεναντίον γάρ τι τῷ ἀγαθῷ ἀεὶ εἶναι ἀνάγκη· οὔτ' ἐν θεοῖς αὐτὰ ἱδρῦσθαι, τὴν δὲ θνητὴν φύσιν καὶ τόνδε τὸν τόπον περιπολεῖ ἐξ ἀνάγκης.* *Theaetetus* 176 A.

Expound fully and justify on Platonic principles every statement contained in this passage; in especial examine the meaning and the necessity of *ὑπεναντίον τι τῷ ἀγαθῷ ἀεὶ εἶναι.* Can you suggest a mode in which Plato might explain metaphysically the nature and cause of evil?

VI. Translate and explain:

(α) *αὐτὴ ἡ οὐσία, ἧς λόγον δίδομεν τοῦ εἶναι καὶ ἐρωτῶντες καὶ ἀποκρινόμενοι.* *Phaedo* 78 D.

(β) ΑΘ. Ἔχε δὴ πρὸς Διός· ἆρ' οὐκ ἂν ἐθέλοις περὶ ἕκαστα τρία νοεῖν; ΚΛ. Πῶς λέγεις; ΑΘ. Ἓν μὲν τὴν οὐσίαν, ἓν δὲ τῆς οὐσίας τὸν λόγον, ἓν δὲ τὸ ὄνομα. *laws* 895 D.

(γ) *ἐκ μὲν οὖν τούτων θεωροῦσι συμβαίνει οὐσίαν εἶναι τὴν ὕλην· ἀδύνατον δέ.* *metaph.* Z iii. 1029ᵃ 26.

Examine the meaning of *οὐσία* in these extracts; and compare the employment of this term by Plato and by Aristotle, accounting for any divergence in their usage. State and discuss the difficulty indicated in the third quotation.

VII. *συνέζευκται δὲ καὶ ἡ φρόνησις τῇ τοῦ ἤθους ἀρετῇ καὶ αὕτη τῇ φρονήσει, εἴπερ αἱ μὲν τῆς φρονήσεως ἀρχαὶ κατὰ τὰς ἠθικάς εἰσιν ἀρετάς, τὸ δ' ὀρθὸν τῶν ἠθικῶν κατὰ τὴν φρόνησιν.* *eth. nic.* X viii 3.

Examine the implication of the moral and intellectual virtues here indicated, and discuss generally how, in the last resort, right conduct is determined upon Aristotle's ethical system.

VIII. Translate with commentary:

(1) *τὸ πάλιν κατ' εἴδη δύνασθαι τέμνειν, κατ' ἄρθρα, ᾗ πέφυκε, καὶ μὴ ἐπιχειρεῖν καταγνύναι μέρος μηδέν, κακοῦ μαγείρου τρόπῳ χρώμενον.* *Phaedrus* 265 E.

(2) cumque superiores non omnem virtutem in ratione esse dicerent sed quasdam virtutes natura aut more perfectas, hic [Zeno] omnis in ratione ponebat; cumque perturbationes animi illi ex homine non tollerent, sed eas contraherent in angustumque deducerent, hic omnibus his quasi morbis voluit carere sapientem.

CIC. *ac. post.* I 38.

(3) Any TWO of the following passages:

(α) *εἰ δ' οὕτως ἔχει δῆλον ὅτι τὰ πάθη λόγοι ἔνυλοί εἰσιν· ὥστε οἱ ὅροι τοιοῦτοι· οἷον τὸ ὀργίζεσθαι κίνησίς τις τοῦ τοιουδὶ σώματος ἢ μέρους ἢ δυνάμεως ὑπὸ τοῦδε ἕνεκα τοῦδε.* *de anima* I i 10.

(β) *καὶ τὸ νοεῖν δὴ καὶ τὸ θεωρεῖν μαραίνεται ἄλλου τινὸς ἔσω φθειρομένου, αὐτὸ δὲ ἀπαθές ἐστιν· τὸ δὲ διανοεῖσθαι καὶ φιλεῖν ἢ μισεῖν οὔκ ἐστιν ἐκείνου πάθη, ἀλλὰ τουδὶ τοῦ ἔχοντος ἐκεῖνο, ᾗ ἐκεῖνο ἔχει. διὸ καὶ τούτου φθειρομένου οὔτε μνημονεύει οὔτε φιλεῖ· οὐ γὰρ ἐκείνου ἦν ἀλλὰ τοῦ κοινοῦ, ὃ ἀπόλωλεν· ὁ δὲ νοῦς ἴσως θειότερόν τι καὶ ἀπαθές ἐστιν.* *ib.* I iv 14.

(γ) *καὶ ἔστιν ὁ μὲν τοιοῦτος νοῦς τῷ πάντα γίγνεσθαι, ὁ δὲ τῷ πάντα ποιεῖν, ὡς ἕξις τις, οἷον τὸ φῶς. τρόπον γάρ τινα καὶ τὸ φῶς ποιεῖ τὰ δυνάμενα ὄντα χρώματα ἐνεργείᾳ χρώματα. καὶ οὗτος ὁ νοῦς χωριστὸς καὶ ἀμιγὴς καὶ ἀπαθής, τῇ οὐσίᾳ ὢν ἐνεργείᾳ.* *ib.* III v 1.

(δ) *τὸ ὑφεστηκὸς δεῖ τέλος λογίζεσθαι καὶ πᾶσαν τὴν ἐναργείαν, ἐφ' ἣν τὰ δοξαζόμενα ἀνάγομεν· εἰ δὲ μή, πάντ' ἀκρισίας καὶ ταραχῆς ἔσται μεστά. εἰ μάχῃ πάσαις ταῖς αἰσθήσεσιν, οὐχ ἕξεις οὐδ' ἃς ἂν αὐτῶν φῇς διεψεῦσθαι πρὸς τί ποιούμενος τὴν ἀναγωγὴν κρίνῃς. εἰ δὲ βεβαιώσεις καὶ τὸ προσμένον ἅπαν ἐν ταῖς δοξαστικαῖς ἐννοίαις καὶ τὸ μή, οὐκ ἐκλείψεις τὸ διεψευσμένον, ὡς τετηρηκὼς ἔσῃ πᾶσαν ἀμφισβήτησιν καὶ πᾶσαν κρίσιν τοῦ ὀρθῶς ἢ μὴ ὀρθῶς.*

DIOG. LAERT. X 146, 147.

FRIDAY, *May* 30, 1884. 9—12.

WRITE an Essay upon one of the following subjects:

1. Hylozoism, Materialism, Idealism; the strict meaning of these conceptions and their current application to systems of Greek Philosophy, with especial reference to the determination of the true character of the Presocratic speculations.

2. The relations of Platonism to Herakleitos and Parmenides.

3. *αὐτὸν ἄρα νοεῖ, εἴπερ ἐστὶ τὸ κράτιστον, καὶ ἔστιν ἡ νόησις νοήσεως νόησις.* Examine this conception of Aristotle's, and estimate how far he succeeded in eliminating dualism from his system.

4. The Logic of Science according to Aristotle, including the connexion of Deduction with Induction and the relation of Definition, Hypothesis, and Axiom to scientific reasoning.

5. The ethical system of the Stoics, its character and antecedents.

SECTION C.

SATURDAY, *May* 31, 1884. 9—12.

WRITE an Essay on one of the following subjects:

1. The part played by Rhetoric in Grecian culture and politics during the fourth century B.C.

2. The life-work of Alexander the Great.

3. Athens as the University of the civilized world in Roman times.

4. "The history of every nation, and Italian history especially, is a *Synoikismos* on a great scale." MOMMSEN.

5. The legal and social position of women at Rome and in the chief Greek States.

6. The history and organisation of the sacred Colleges at Rome.

MONDAY, *June* 2, 1884. 9—12.

GREEK HISTORY, 382—322 B.C.

[The extracts are not to be translated, but they are to be discussed in connection with the questions to which they are severally annexed, and any difficulties they present are to be noted.]

1. WRITE a summary, as full and at the same time as concise as possible, of the facts known in the life of *either*

(*a*) Kallistratos,
or (*β*) Charidemos,
or (*γ*) Hypereides.

2. (*a*) Draw a map of Macedonia, with the Grecian cities on the coast, at the time of the accession of Philip:

Or (*β*) a map of Syracuse at the time of its capture by Dion.

3. Give some account of *one* of the following groups of works; consider their authorship, and their value as historical authorities for the period:

(*a*) the letters attributed to Plato,

(*β*) Isokrates de Pace, and the treatise *περὶ προσόδων* attributed to Xenophon,

(*γ*) the speeches *περὶ Ἀλοννήσου* and *περὶ τῶν πρὸς Ἀλέξανδρον συνθηκῶν* attributed to Demosthenes.

4. (*a*) Explain the changes in the regulation of the trierarchy during this period.

Or (*β*) Give an account of the constitution of the Macedonian army under Alexander the Great.

5. Consider from a chronological point of view *one* of the following two series of events:

(*a*) the policy of Athens in relation to Macedon from the alliance between Olynthus and Athens (Ol. 107, 1) till the destruction of Olynthus by Philip.

Οὗτος (ὁ Ὀλυνθιακὸς πόλεμος) ἐπὶ Καλλιμάχου γέγονεν ἄρχοντος, ὡς δηλοῖ Φιλόχορος ἐν ϛ' βίβλῳ τῆς Ἀτθίδος, κατὰ λέξιν οὕτω γράφων· Καλλίμαχος Περγασῆθεν· ἐπὶ τούτου Ὀλυνθίοις πολεμουμένοις ὑπὸ Φιλίππου καὶ πρέσβεις Ἀθήναζε πέμψασιν οἱ Ἀθηναῖοι συμμαχίαν τε ἐποιήσαντο καὶ βοήθειαν ἔπεμψαν, πελταστὰς μὲν δισχιλίους, τριήρεις δὲ τριάκοντα τὰς μετὰ Χάρητος, ἃς καὶ συνεπλήρωσαν. Ἔπειτα διεξελθὼν ὀλίγα τὰ μεταξὺ γενόμενα, τίθησι ταυτί· Περὶ δὲ τὸν αὐτὸν χρόνον Χαλκιδέων τῶν ἐπὶ Θράκης θλιβομένων τῷ πολέμῳ, καὶ πρεσβευσαμένων Ἀθήναζε, Χαρίδημον αὐτοῖς ἔπεμψαν οἱ Ἀθηναῖοι τὸν ἐν Ἑλλεσπόντῳ στρατηγόν· ὃς ἔχων ὀκτωκαίδεκα τριήρεις καὶ πελταστὰς τετρακισχιλίους, ἱππεῖς δὲ πεντήκοντα καὶ ἑκατόν, ἦλθεν εἴς τε Παλλήνην καὶ τὴν Βοττιαίαν μετ' Ὀλυνθίων, καὶ τὴν χώραν ἐπόρθησεν.

Ἔπειθ' ὑπὲρ τῆς τρίτης συμμαχίας λέγει ταυτί· Πάλιν δὲ τῶν Ὀλυνθίων πρέσβεις ἀποστειλάντων εἰς τὰς Ἀθήνας, καὶ δεομένων, μὴ περιιδεῖν αὐτοὺς καταπολεμηθέντας, ἀλλὰ πρὸς ταῖς ὑπαρχούσαις δυνάμεσι πέμψαι βοήθειαν, μὴ ξενικὴν, ἀλλ' αὐτῶν Ἀθηναίων, ἔπεμψεν αὐτοῖς ὁ δῆμος τριήρεις μὲν ἑτέρας ἑπτακαίδεκα, τῶν δὲ πολιτῶν ὁπλίτας δισχιλίους καὶ ἱππεῖς τριακοσίους ἐν ναυσὶν ἱππηγοῖς, στρατηγὸν δὲ Χάρητα τοῦ στόλου παντός.

DIONYS. HAL.

Ἰστέον δὲ, ὅτι φησὶ καὶ ὁ Φιλόχορος, ὅτι τρεῖς βοήθειαι ἐπέμφθησαν, καθ' ἕκαστον λόγον (τοῦ Δημοσθένους) μιᾶς πεμπομένης, ὡς τῆς πρώτης μὴ οὔσης ἱκανῆς.

ULPIAN ad DEMOSTH. *Olynth.* II.

Or (*β*) Athenian influence and enterprize in Macedonia and the neighbouring coast-lands from the event mentioned in the following extract till the accession of Philip.

Συμμαχίας γὰρ Λακεδαιμονίων καὶ τῶν ἄλλων Ἑλλήνων συνελθούσης, εἷς ὢν τούτων Ἀμύντας ὁ Φιλίππου πατήρ, καὶ πέμπων σύνεδρον, καὶ τῆς καθ' ἑαυτοῦ ψήφου κύριος ὤν, ἐψηφίσατο Ἀμφίπολιν τὴν Ἀθηναίων συνεξαιρεῖν μετὰ τῶν ἄλλων Ἑλλήνων Ἀθηναίοις.

AESCHINES, *F. L.* § 32.

6. Discuss the historical questions raised by any *one* of the following three extracts, mentioning any other ancient authorities for the subject you select.

(*α*) Οἱ μὲν οὖν Ἀθηναῖοι ὁρῶντες τὴν τῶν Λακεδαιμονίων ῥώμην καὶ ὅτι πόλεμος ἐν Κορίνθῳ οὐκέτι ἦν, ἀλλ' ἤδη παριόντες τὴν Ἀττικὴν οἱ Λακεδαιμόνιοι εἰς τὰς Θήβας ἐνέβαλλον, οὕτως ἐφοβοῦντο ὥστε καὶ τὼ δύο στρατηγώ, ὧ συνηπιστάσθην τὴν τοῦ Μέλωνος ἐπὶ τοὺς περὶ Λεοντιάδην ἐπανάστασιν, κρίναντες τὸν μὲν ἀπέκτειναν, τὸν δ', ἐπεὶ οὐχ ὑπέμεινεν, ἐφυγάδευσαν.

XEN. *Hell.* V. iv. 19.

(*β*) Ἐν δὲ τῇ τρισκαιδεκάτῃ τῶν Φιλιππικῶν περὶ Χαβρίου τοῦ Ἀθηναίου (Θεόπομπος) ἱστορῶν φησιν· Οὐ δυνάμενος δὲ ζῆν ἐν τῇ πόλει, τὰ μὲν διὰ τὴν ἀσέλγειαν καὶ διὰ τὴν πολυτέλειαν τὴν αὐτοῦ τὴν περὶ τὸν βίον, τὰ δὲ διὰ τοὺς Ἀθηναίους· ἅπασι γάρ εἰσι χαλεποί· διὸ καὶ εἵλοντο αὐτῶν οἱ ἔνδοξοι ἔξω τῆς πόλεως καταβιοῦν· Ἰφικράτης μὲν ἐν Θρᾴκῃ, Κόνων δ' ἐν Κύπρῳ, Τιμόθεος δ' ἐν Λέσβῳ, Χάρης δ' ἐν Σιγείῳ, καὶ αὐτὸς ὁ Χαβρίας ἐν Αἰγύπτῳ.

ATHENAEUS.

(*γ*) Ἀλέξανδρος γὰρ βραχεῖ χρόνῳ πρότερον τῆς τελευτῆς ἔκρινε κατάγειν ἅπαντας τοὺς ἐν ταῖς Ἑλληνίσι πόλεσι φυγάδας, ἅμα μὲν δόξης ἕνεκεν, ἅμα δὲ βουλόμενος ἔχειν ἐν ἑκάστῃ πόλει πολλοὺς ἰδίους ταῖς εὐνοίαις πρὸς τοὺς νεωτερισμοὺς καὶ τὰς ἀποστάσεις τῶν Ἑλλήνων. Διόπερ, ὑπογύων ὄντων τῶν Ὀλυμπίων, ἐξέπεμψεν εἰς τὴν Ἑλλάδα Νικάνορα τὸν Σταγειρίτην, δοὺς ἐπιστολὴν περὶ τῆς καθόδου· ταύτην δὲ προσέταξεν ἐν τῇ πανηγύρει διὰ τοῦ νικήσαντος κήρυκος ἀναγνωσθῆναι τοῖς πλήθεσι. Τούτου δὲ ποιήσαντος τὸ προσταχθέν, λαβὼν ὁ κῆρυξ ἀνέγνω τὴν ἐπιστολὴν τήνδε· Βασιλεὺς Ἀλέξανδρος τοῖς ἐκ τῶν Ἑλληνίδων πόλεων φυγάσι. Τοῦ μὲν φεύγειν ὑμᾶς οὐχ ἡμεῖς αἴτιοι γεγόναμεν, τοῦ δὲ κατελθεῖν εἰς τὰς ἰδίας πατρίδας ἡμεῖς ἐσόμεθα, πλὴν τῶν ἐναγῶν. Γεγράφαμεν δὲ Ἀντιπάτρῳ περὶ τούτων, ὅπως τὰς μὴ βουλομένας τῶν πόλεων κατάγειν ἀναγκάσῃ. Κηρυχθέντων δὲ τούτων, μεγάλῳ κρότῳ ἐπεσήμαινε τὸ πλῆθος· ἀποδεξάμενοι γὰρ οἱ κατὰ τὴν πανήγυριν τὴν χάριν τοῦ βασιλέως διὰ τὴν χαρὰν ἠμείβοντο τὴν εὐεργεσίαν τοῖς ἐπαίνοις. Ἦσαν δ' οἱ φυγάδες ἀπηντηκότες ἅπαντες ἐπὶ τὴν πανήγυριν, ὄντες πλείους τῶν δισμυρίων.

DIODORUS XVIII. viii. 2—5.

7. (*a*) Give an account of the battle of Mantinea, with the tactics immediately preceding it.

Ἐπεὶ γὰρ οἱ Μαντινεῖς αὖθις ἀπέστησαν τῶν Θηβαίων καὶ μετεπέμποντο τοὺς Λακεδαιμονίους, αἰσθόμενος ὁ Ἐπαμεινώνδας τὸν Ἀγησίλαον ἐξεστρατευμένον μετὰ τῆς δυνάμεως καὶ προσιόντα, λαθὼν τοὺς Μαντινεῖς ἀνέζευξε νυκτὸς ἐκ Τεγέας ἄγων ἐπ' αὐτὴν τὴν Λακεδαίμονα τὸ στράτευμα, καὶ μικρὸν ἐδέησε παραλλάξας τὸν Ἀγησίλαον ἔρημον ἐξαίφνης καταλαβεῖν τὴν πόλιν. Εὐθύνου δὲ Θεσπιέως, ὡς Καλλισθένης φησίν, ὡς δὲ Ξενοφῶν, Κρητός τινος, ἐξαγγείλαντος τῷ Ἀγησιλάῳ, ταχὺ προπέμψας ἱππέα τοῖς ἐν τῇ πόλει φράσοντα μετ' οὐ πολὺ καὶ αὐτὸς παρῆλθεν εἰς τὴν Σπάρτην.

PLUTARCH, *Agesilaus*, 34. 3, 4.

Καὶ γὰρ ὅτε τὸ τελευταῖον παρήγγειλεν αὐτοῖς παρασκευάζεσθαι ὡς μάχης ἐσομένης, προθύμως μὲν ἐλευκοῦντο οἱ ἱππεῖς τὰ κράνη κελεύοντος ἐκείνου, ἐπεγράφοντο δὲ καὶ οἱ τῶν Ἀρκάδων ὁπλῖται ῥόπαλα*, ὡς Θηβαῖοι ὄντες, πάντες δὲ ἠκονῶντο καὶ λόγχας καὶ μαχαίρας καὶ ἐλαμπρύνοντο τὰς ἀσπίδας.

XEN. *Hell.* VII. iv. 20.

* ῥόπαλα. MSS. quidam ῥόπαλα ἔχοντες.

Or (*β*) Give a summary of the history of Chios during this period.

Ἔστι δὲ Θεόπομπος Χῖος μὲν τὸ γένος, υἱὸς Δαμοστράτου, φυγεῖν δὲ λέγεται τῆς πατρίδος ἅμα τῷ πατρί, ἐπὶ λακωνισμῷ τοῦ πατρὸς ἁλόντος.

PHOTIUS.

Εὐθὺς οὖν ὁ δῆμος ἐψηφίσατο τριήρεις μὲν ἑκατὸν ναυπηγεῖσθαι, νεώρια δὲ ταύταις ἴσα τὸν ἀριθμόν, Ῥοδίους δὲ καὶ Χίους καὶ Βυζαντίους προτρέπεσθαι βοηθῆσαι ταῖς ἐπιβολαῖς. Αὐτὸς δὲ μετὰ δυνάμεως ἐκπεμφθεὶς ἐπὶ τὰς εἰρημένας πόλεις, Λάχητα μὲν τὸν Ἀθηναίων στρατηγόν, ἔχοντα στόλον ἀξιόλογον καὶ διακωλύειν τοὺς Θηβαίους ἀπεσταλμένον, καταπληξάμενος καὶ ἀποπλεῦσαι συναναγκάσας, ἰδίας τὰς πόλεις τοῖς Θηβαίοις ἐποίησεν.

DIODORUS XV. 79.

Μαύσωλος, τῆς Καρίας σατράπης, ὑπήκοος ὢν τῷ βασιλεῖ τῶν Περσῶν, βουλόμενος αὐτὸν πρὸς πλείω εὐνοίαν ἑλκύσαι, ἐπεχείρησε καταδουλώσασθαι αὐτῷ τὰς τρεῖς ταύτας νήσους, Χῖον καὶ Ῥόδον καὶ Κῶν· εἶτα μαθόντες οἱ Ἀθηναῖοι ἔπεμψαν πρεσβεῖς ἐγκαλοῦντες αὐτῷ.

SCHOL. ad DEM. *Timocr.*

Θαυμάζω δ' εἰ μηδεὶς ὑμῶν ἡγεῖται Χίων ὀλιγαρχουμένων καὶ Μυτιληναίων, καὶ νυνὶ Ῥοδίων καὶ πάντων ἀνθρώπων ὀλίγου δέω λέγειν εἰς ταύτην τὴν δουλείαν ὑπαγομένων, συγκινδυνεύειν τὴν παρ' ἡμῖν πολιτείαν, μηδὲ λογίζεται τοῦθ', ὅτι οὐκ ἔστιν ὅπως, εἰ δι' ὀλιγαρχίας ἅπαντα συστήσεται, τὸν παρ' ὑμῖν δῆμον ἐάσουσιν.

DEM. *de Rhod. Libert.* § 19.

Ἐν τούτῳ δὲ καὶ Ἡγέλοχος κατέπλευσεν εἰς Αἴγυπτον, καὶ ἀπαγγέλλει Ἀλεξάνδρῳ Τενεδίους τε ἀποστάντας Περσῶν σφίσι προσθέσθαι, (καὶ γὰρ καὶ ἄκοντας Πέρσαις προσχωρῆσαι) καὶ Χίων ὅτι δὴ ὁ δῆμος ἐπηγάγετο σφᾶς βίᾳ τῶν κατεχόντων τὴν πόλιν, οὓς Αὐτοφραδάτης τε καὶ Φαρνάβαζος ἐγκατέστησαν.

ARRIAN III. ii. 3.

8. Give an abstract of the following portion of an inscription, write a historical commentary on it, and explain any terms that present a difficulty.

ἐπειδὴ δὲ Ἰουλιητῶν οἱ παραβάντες τοὺς ὅρκ-
ους καὶ τὰς συνθήκας καὶ πολεμήσαντες ἐναντία τῷ δή-
μῳ τῷ Ἀθηναίων καὶ Κε[ί]οις καὶ τοῖς ἄλλοις συμμάχοι-
ς καὶ θανάτου αὐτῶν καταγνωσθέντος κατελθόντ[ε]ς ἐς
Κέω τάς τε στήλας ἐξέβαλο[ν] ἐ[ν αἷ]ς ἦσαν ἀναγεγραμ[μ]έν-
αι αἱ συνθῆκαι πρὸς Ἀθηναίους καὶ τὰ ὀνόματα τῶν παρα-
βάντων τοὺς ὅρκους καὶ τὰς συνθήκας, καὶ τοὺς φίλους τοὺς Ἀ-
θηναίων οὓς κατήγαγεν ὁ δῆμος τοὺς μὲν ἀπέκτειναν, τῶν
δὲ θάνατον κατέγνωσαν καὶ τὰς οὐ[σ]ίας ἐδημίευσαν παρὰ
τοὺς ὅρκους καὶ τὰς συνθήκας, Σατυρίδου καὶ Τιμοξένου κα-
ὶ Μιλτιάδου, ὅτι κατηγόρουν Ἀντι[πάτ]ρου ὅτε ἡ βουλὴ ἡ Ἀθην-
αίων κατέγνω αὐτοῦ θάνατον ἀποκτ[εί]ναντος τὸν πρόξε-
νον τὸν Ἀθηναίων . . . ισ . ωνα παρὰ [τ]ὰ ψηφίσματα τοῦ δή-
μου τοῦ Ἀθηναίων κ[α]ὶ [π]αρὰ [πά]ντα (sic) τοὺς ὅρκους καὶ τὰς συνθή-
κας, φεύγειν αὐτοὺς [Κ]έω [καὶ] Ἀθήνας καὶ τὴν οὐσίαν αὐτῶ-
ν δημοσίαν εἶναι τοῦ δή[μου] τοῦ Ἰουλιητῶν· ἀπογράψαι δ-
ὲ αὐτῶν τὰ ὀνόματα αὐτί[κα μά]λα ἐναντίον τοῦ δήμου τῷ γ-
ραμματεῖ τοὺς στρατηγοὺ[ς τ]οὺ[ς] Ἰουλιητῶν τοὺς ἐπιδημοῦν-
τας Ἀθήνησι· ἐὰν δέ [τινες τῶν] ἀπογραφέντων ἀμφισβητ-
ῶσι μὴ εἶναι τούτων τῶ[ν ἀνδρῶ]ν, ἐξεῖναι αὐτοῖς ἐγγυη-
τὰς καταστήσασι πρὸς [τ]οὺ[ς] σ[τρ]ατηγοὺς τοὺς Ἰουλιητῶν τρ-
ιάκοντα ἡμερῶν δίκα[ς] ὑ[π]ο[σχ]εῖν [κα]τὰ τ[οὺ]ς ὅρκους καὶ τὰς
συνθήκας ἐν Κέῳ καὶ [ἐν τῇ ἐκκ]λήτῳ [πό]λει Ἀθήνησι· Σ-
ατυρίδην δὲ καὶ Τιμό[ξενον καὶ] Μ[ιλτιάδ]ην ἀ[π]ιέναι εἰ-
ς Κέω ἐπὶ τὰ ἑαυτῶν· ἐπ[αιν]έ[σ]α[ι δ]ὲ τ[οὺς] ἥκοντας Ἰουλιητῶ-
ν Δημήτριον Ἡρακλε[ίδη]ν Ἐ[χέτι]μο[ν] Κ[αλ]λίφαντον· ἐπαι-
νέσαι δὲ καὶ Σατυρ[ίδην] κα[ὶ Τιμ]ό[ξενον] καὶ Μιλτιάδην.
ἐπαινέσαι δὲ καὶ [τ]ὴν [π]όλι[ν τὴν] Κα[ρ]θαιῶν καὶ Ἀγλώκρι-
τον καὶ καλέσαι αὐτοὺς ἐπὶ [ξ]έ[νια εἰς τ[ὸ πρυτανεῖον ἐς
αὔριον.

Give some account of the most important inscriptions by which light is thrown on the history of the "Second Athenian Confederacy".

MONDAY, *June* 2, 1884. 1.30—4.30.

GREEK LAW.

1. DESCRIBE the constitution of the law-courts by which ordinary civil cases were tried in the time of Isaeus.

2. Explain the terms *διαψήφισις* and *ἔφεσις*.

Comment on:

πρὶν γὰρ ἐμὲ ἥκειν ἐκ τῆς Πυθιάδος, ἔλεγε πρὸς τοὺς δημότας Ἀπολλόδωρος ὅτι πεποιημένος εἴη με υἱὸν καὶ ἐγγεγραφὼς εἰς τοὺς συγγενεῖς καὶ φράτορας, καὶ παρεδεδώκει τὴν οὐσίαν, καὶ διεκελεύεθ' ὅπως ἄν, εἴ τι πάθοι πρότερον, ἐγγράφωσί με εἰς τὸ ληξιαρχικὸν γραμματεῖον Θράσυλλον Ἀπολλοδώρου καὶ μὴ ὡς ἄλλως ποιήσωσι. κἀκεῖνοι ταῦτα ἀκούσαντες, τούτων ἐν ἀρχαιρεσίαις κατηγορούντων καὶ λεγόντων ὡς οὐκ ἐποιήσατό με υἱόν, καὶ ἐξ ὧν ἤκουσαν καὶ ἐξ ὧν ᾔδεσαν, ὀμόσαντες καθ' ἱερῶν ἐνέγραψάν με, καθάπερ ἐκεῖνος ἐκέλευε.

IS. VII. 27, 28.

οὐ μόνον περὶ χρημάτων ἡμᾶς ἀλλὰ καὶ περὶ τῆς πατρίδος εἰς κινδύνους καθίστησιν. ἐὰν γὰρ ἐξαπατηθῆτε ὑμεῖς πεισθέντες ὡς ἡ μήτηρ ἡμῶν οὐκ ἦν πολῖτις, οὐδ' ἡμεῖς ἐσμεν· μετ' Εὐκλείδην γὰρ ἄρχοντα γεγόναμεν.

IS. VIII. 43.

3. Explain the distinction between *διαμαρτυρία* and *εὐθυδικία*, and the difference (in respect of these procedures) between the privileges enjoyed by a son adopted during the adopter's life-time, and a son adopted by will.

4. In what order did Attic law give the right of succession to different degrees of kindred?

Translate and explain:

οἱ δ' ὑπὲρ τῆς Ἁγνίου μητρός, γένει μὲν ἐμοὶ ταὐτὸ προσηκούσης (ἀδελφὴ γὰρ ἦν τοῦ Στρατίου) νόμῳ δὲ ἀποκλειομένης, ὃς κελεύει κρατεῖν τοὺς ἄρρενας, τοῦτο μὲν εἴασαν, οἰόμενοι δ' ἐμοῦ πλεονεκτήσειν μητέρα εἶναι τοῦ τελευτήσαντος ἔγραψαν· ὃ συγγενέστατον μὲν ἦν τῇ φύσει πάντων, ἐν δὲ ταῖς ἀγχιστείαις ὁμολογουμένως οὐκ ἔστιν.

IS. XI. 17.

ΝΟΜΟΣ. *Προειπεῖν τῷ κτείναντι ἐν ἀγορᾷ ἐντὸς ἀνεψιότητος, συνδιώκειν δὲ καὶ ἀνεψιῶν παῖδας καὶ γαμβροὺς καὶ πενθεροὺς καὶ φράτερας. ἐὰν δὲ αἰδέσασθαι δέῃ, ἐὰν μὲν πατὴρ ᾖ ἢ ἀδελφὸς ἢ υἱεῖς, πάντας, ἢ τὸν κωλύοντα κρατεῖν. ἐὰν δὲ τούτων μηδεὶς ᾖ, κτείνῃ δ' ἄκων, γνῶσι δ' οἱ πεντήκοντα καὶ εἷς ἄκοντα κτεῖναι, αἰδεσάσθων οἱ φράτερες, ἐὰν θέλωσι, δέκα· τούτους δ' οἱ πεντήκοντα καὶ εἷς ἀριστίνδην αἱρείσθων. καὶ οἱ πρότερον κτείναντες ἐν τῷδε τῷ θεσμῷ ἐνεχέσθων.*

DEM. *Macart.* 57.

5. Point out the importance of personal names in preserving the continuity of a Greek family.

6. Explain briefly the nature of the following processes:

γραφὴ ψευδοκλητείας, γραφὴ ἀπροστασίου, δίκη ἀποπέμψεως, δίκη ἐξαιρέσεως, ἐξούλης δίκη, προβολή.

ROMAN LAW.

1. LEGES praeclarissimae de XII tabulis tralatae duae, quarum altera priuilegia tollit, altera de capite ciuis rogari nisi comitiatu maximo uetat. Explain the importance of the foregoing passage.

2. What view do you take of Livy's statement that Sp. Cassius was prosecuted by two *quaestors;* and of the tradition that Horatius was tried for *perduellio?*

3. Discuss the question of the court before which the speech of Cicero for Rabirius was delivered.

4. Give a brief account *either* of the process by *Interdict, or* of the constitution and functions of the courts of the *centumuiri* and *decemuiri stlitibus iudicandis.*

5. Translate with explanations:

(*a*) Certamen inter P. Licinium pontificem maximum fuit et Q. Fabium Pictorem flaminem Quirinalem...imperia inhibita ultro citroque et pignera capta, et multae dictae, et tribuni appellati et prouocatum ad populum. LIVY XXXVII. 51.

(*b*) Quae municipia coloniae praefecturae fora conciliabula ciuium Romanorum sunt erunt, nei quis in eorum quo municipio colonia praefectura foro conciliabulo in senatu decurionibus conscreipteisque esto neue quoi ibi in eo ordine sententiam deicere ferre liceto: quei furtei quod ipse fecit fecerit condemnatus pactusque est erit; queiue iudicio fiduciae pro socio tutelae mandatei iniuriarum deue dolo malo condemnatus est erit...queiue iudicio publico Romae condemnatus est erit quocirca in Italia eum esse non liceat neque in integrum restitutus est erit...

6. Briefly indicate the purport of **not more than five** of the following, viz.: notio censoria—ignominia—trinundinum—iusti triginta dies—vexillum russi coloris—animaduertere in aliquem more maiorum—uindicta—lex Aternia Tarpeia—lex Aelia et Fufia—lex Sempronia de capite ciuium—lex Appuleia de maiestate.

7. Explain the difficulties and shew the importance of the following passages **(which need not be translated)**:

(*a*) Quoniam diligentiae meae temporis angustiis obstitisti meque in semihorae curriculum coegisti, parebitur. *Pro Rab.* § 6.

(*b*) Porcia lex uirgas ab omnium ciuium Romanorum corpore amouit. *ib.* § 12.

(*c*) Eum iste omnis et suppliciorum et uerborum acerbitates non ex memoria uestra ac patrum uestrorum sed ex annalium monumentis atque ex regum commentariis conquisierit. *ib.* § 15.

(*d*) Quid de tribunis aerariis [dicemus] ceterorumque ordinum omnium hominibus qui tum arma pro communi libertate ceperunt? *ib.* § 27.

(*e*) Tum denique ei (Catilinae) resistebam, neque solum illi hosti ac parricidae.... *Pro Sulla* § 20.

(*f*) Caecilius, qui si id promulgauit in quo res indicatas uideatur uoluisse rescindere...recte reprehendis. *ib.* § 63.

(*g*) Vos reiectione interposita nihil suspicantibus nobis repentini in nos iudices consedistis. *ib.* § 92.

(*h*) Quid tandem te impedit? mosne maiorum? At persaepe etiam priuati in hac re publica perniciosos ciuis morte multarunt. An leges quae de ciuium Romanorum supplicio rogatae sunt? At numquam in hac urbe, qui a re publica defecerunt, ciuium iura tenuerunt. *In Cat.* 1 § 28.

(*i*) Sumptibus in uetere aere alieno uacillant, qui uadimoniis, iudiciis, proscriptionibus bonorum defatigati, permulti se in illa castra conferre dicuntur. Hosce ego non tam milites acres quam infitiatores lentos esse arbitror. *ib.* 2 § 21.

(*k*) *τοῖς γὰρ θανάτου κρινομένοις, ἐπὰν καταδικάζωνται, δίδωσι τὴν ἐξουσίαν τὸ παρ' αὐτοῖς ἔθος ἀπαλλάττεσθαι φανερῶς κἂν ἔτι μία λείπηται φυλὴ τῶν ἐπικυρούσῶν τὴν κρίσιν ἀψηφοφόρητος, ἑκούσιον ἑαυτοῦ καταγνόντα φυγάδειαν.* POLYB.

TUESDAY, *June* 3, 1884. 9—12.

(Reference should be made to original authorities and dates supplied where the answer requires them. Bracketed questions are alternative.)

ROMAN HISTORY FROM THE TRIBUNATE OF TIBERIUS GRACCHUS TO THE DEATH OF JULIUS CAESAR.

1. DESCRIBE generally the relation in which the account of the Gracchi by Appian stands to that by Plutarch, and shew how the differences and resemblances between the two are to be explained. In what state has the history of Dio Cassius come down to us, and who is his principal authority?

2. (*a*) Summarise the evidence which shews the reality of the evils Tib. Gracchus desired to remedy. Compare and contrast the qualities of the two brothers, and give a brief account of the legislation of the younger.
   (*b*) Describe the character and career of the tribune Drusus [the younger] and of the tribune Sulpicius.

3. (*a*) Trace the causes of the wars against Mithridates, and describe the main incidents in their course, with the help of a map.
   (*b*) Trace the history of Roman dealings with Jugurtha, attaching a sketch map of the scene of the wars. Shew in what respects Sallust's account is of doubtful credibility.

4. (*a*) Draw the character of Sulla, criticise his policy and describe carefully the institutions which he established.
   (*b*) Give an account of the agitations which led to the destruction of the fabric raised by Sulla.

5. (*a*) Trace the course of Roman politics from the suppression of the conspiracy of Catiline to the return of Cicero from exile.
   (*b*) Trace the course of Roman politics from Cicero's return to the outbreak of the Civil war.

6. (*a*) Discuss carefully the questions of constitutional law and practice raised by Caesar's action against Pompeius.
   (*b*) Characterise the domination of Caesar at Rome, giving an account of the chief of his legislative measures. Especially shew how Caesar's course during the last year of his life was calculated to stimulate the discontent which resulted in the conspiracy.

7. Translate **not more than six** of the following passages, with full explanations of the matters to which they refer, and of any difficulties to which they give rise:

(*a*) Praetor quei post h. l. rogatam ex h. l. ioudex factus erit is in diebus x proxumeis quibus quisque eorum eum mag. coiperit facito utei CDLuiros ita legat quei hace in ciuitate HS CCCC n. plurisue census siet dum nequem eorum legat quei tr. pl. q. IIIuir cap. tr. mil. l. IIII. primis aliqua earum queiue in senatu siet fueritue.

(*b*) quei ager publicus populi Romani in terra Italia P. Muucio L. Calpurnio cos. fuit, extra eum agrum quei ager ex lege plebiue scito quod C. Sempronius Ti. f. tr. pl. rog. exceptum cauitumque est nei diuideretur, quod quoieique de eo agro loco agri locei aedificiei, quibus in Italia IIIuir dedit adsignauit reliquit inue formas tabulasue retulit referiue iussit, ager...quei supra scriptus est priuatus esto.

(*c*) ...Tribus...principium fuit: pro tribu...primus sciuit...cons. quei nunc sunt, iei ante K. Decembreis primas de eis quei ciues Romanei sunt uiatorem unum legunto, quei in ea decuria uiator appareat, quam decuriam uiatorum ex noneis Decembribus primeis quaestoribus ad aerarium apparere oportet oportebit.

Complete conjecturally the official heading of this law.

(*d*) ...Asia Ti. Gracchus perseuerauit in ciuibus, sociorum nominisque Latini iura neclexit ac foedera. Cic. Rep. III § 41 (fragmentary).

(*e*) Sp. Thorius agrum publicum uitioso et inutili lege uectigali leuauit.
Cic. Brut. § 136.

(*f*) ...cum Sempronijs rogationibus equester ordo in possessione iudiciorum locaretur aut rursum Seruiliae leges senatui iudicia redderent Mariusque et Sulla olim de eo uel praecipue bellarent. Tac. An. XII c. 60.

(*g*) Glaucia et plebem tenebat et equestrem ordinem beneficio legis deuinxerat.
Cic. Brut. § 224.

(*h*) ...cum omne Latium atque Picenum, Etruria omnis atque Campania, postremo Italia contra matrem suam consurgeret. Florus II c. 18.

(*i*) Cum ita ciuitas Italiae data esset ut in octo tribubus contribuerentur noui ciues, Cinna in omnibus tribubus eos se distributurum pollicitus est.
Vel. Pat. II c. 20.

(*k*) Isdemque consulibus sedentibus atque inspectantibus lata lex ne auspicia ualerent, ne quis obnuntiaret ne quis legi intercederet, ut omnibus fastis diebus legem ferri liceret; ut lex Aelia, lex Fufia ne valeret. Cic, Sest. § 34.

(*l*) *αὐτῷ δὲ [Καίσαρι] τιμαὶ πᾶσαι ὅσα ὑπὲρ ἄνθρωπον ἀμέτρως ἐς χάριν ἐπενοοῦντο, θυσιῶν τε πέρι καὶ ἀγώνων καὶ ἀναθημάτων ἐν πᾶσιν ἱεροῖς καὶ δημοσίοις χωρίοις, ἀνὰ φυλὴν ἑκάστην καὶ ἐν ἔθνεσιν ἅπασι.*

8. Give some account of **not more than five** of the following statutes, viz. Iunia, Domitia, Caecilia Didia, Licinia Mucia, Varia, Gellia Cornelia, Pompeia de iure magistratuum, Roscia, Cassia Terentia, Rubria.

TUESDAY, *June* 3, 1884. 1.30—4.30.

N.B. Only one question in each pair is to be attempted. You are requested to send up your answers to Greek and Roman History separately.

GREEK HISTORY.

1. (*a*) GIVE a sketch of the political constitution of the Greek States as represented in the Homeric poems. Are any differences perceptible between the *Iliad* and the *Odyssey* in this matter? What changes in the constitution of society become discernible when we pass from the Homeric poetry to that of Hesiod and of Theognis? How may the dates of these writers be determined?

(*b*) Describe, with a map, the course of Greek colonization in Italy and Sicily, mentioning the assumed dates of foundation of the principal cities, the cities from which they took their rise, and their periods of greatest prosperity.

2. (*a*) Explain clearly the place occupied by the following in the Spartan constitution, viz.: *ῥήτρα, ὅμοιοι, περίοικοι, βίδεοι, ἐνωμοτία, μόρα.* State the resemblances between the Spartan and Cretan institutions and shew how they are to be accounted for.

(*b*) Explain clearly the following terms used in connexion with the institutions of Athens, viz.: *εὐπατρίδαι, τριττύς, ναυκραρία, ἐφέται, ἰσοτελεῖς, κληροῦχοι, τελῶναι, κωλαγρέται.*

3. (*a*) What are the chief sources of information we possess concerning the expulsion of the Peisistratids and the reforms of Cleisthenes? Mention the most important of the difficulties which arise from the accounts we have received.

(*b*) Shew very briefly the dominant ideas in party politics at Athens from 480—429 B.C., and indicate the chief measures on which parties were divided.

4. (*a*) Exhibit, with the aid of maps, the mode in which the inheritance of Alexander was divided. Narrate the circumstances which gave rise to the kingdom of Pergamus.

(*b*) Give some account of the literary and scientific Schools of Alexandria from 300—200 B.C.

5. (*a*) Shew exactly the points at which the accuracy and impartiality of Thucydides for the time from 425—411 B.C. may with some show of reason be doubted. Discuss the value of the side lights which Aristophanes throws on the Athenian politics of this time.

(*b*) Give an account of the career either of Agathocles or of Gelon.

ROMAN HISTORY.

1. (*a*) INDICATE the probable sources of the chief legends connecting the foundation of Rome with Troy and with Aeneas.

(*b*) What ancient facts may we believe to lie at the root of the following institutions:

(*α*) The two sets of *Luperci*,

(*β*) The five witnesses at *mancipatio*, and the ten at *confarreatio*,

(*γ*) The appointment of a dictator *clavi figendi caussa*?

2. (*a*) Describe briefly the process followed in the election of consuls. What was the theory as to the parts played by the presiding officer and the voters respectively? What was the origin of the office of *interrex*, and what were its functions? From what time do the earliest laws against *ambitus* date?

(*b*) Write a short history of the struggle over the Licinio-Sextian laws.

3. (*a*) Give some account of the purely indigenous forms of Italian poetry, and sketch their development.

(*b*) Describe the process by which foreign worships were introduced at Rome by public authority. Who was the deity whose worship was first thus introduced? Briefly indicate the chief subsequent importations.

4. (*a*) Sketch the constitution of Carthage. Had Rome any danger to fear from Carthage after the second Punic War?

(*b*) Give a summary of the relations of Rome with the Achaean and Aetolian leagues.

5. (*a*) Consider the social position of the Roman Emperor, and compare it with that of other monarchs.

(*b*) In what respects may the Empire under the Flavians and Antonines be contrasted with the previous phase of the Empire; and in what respects may the periods filled by these two families themselves be contrasted?

SECTION D.

WEDNESDAY, *May* 28, 1884. 9—12.

HISTORY OF ART.

[*You are recommended to attempt, partially at least, not less than* **six** *of these questions.*]

1. ΧΗΡΑΜΥΗΣΜΑΝΕΘΗΚΕΝΤΗΡΗΙΑΓΑΛΜΑ

Describe the ancient statue which bears the above inscription: indicate its place in the history of art, and the results of the excavations made in the neighbourhood where it was discovered.

2. *μετὰ δὲ ἡ Ἀστυάγεω τοῦ Κυαξάρεω ἡγεμονίη καταιρεθεῖσα ὑπὸ Κύρου τοῦ Καμβύσεω καὶ τὰ τῶν Περσέων πρήγματα αὐξανόμενα πένθεος μὲν Κροῖσον ἀπέπαυσε, ἐνέβησε δὲ ἐς φροντίδα, εἴ κως δύναιτο, πρὶν μεγάλους γενέσθαι τοὺς Πέρσας, καταλαβεῖν αὐτῶν αὐξανομένην τὴν δύναμιν. μετὰ ὦν τὴν διάνοιαν ταύτην αὐτίκα ἀπεπειρᾶτο τῶν μαντηΐων τῶν τε ἐν Ἕλλησι καὶ τοῦ ἐν Λιβύῃ, διαπέμψας ἄλλους ἄλλῃ, τοὺς μὲν ἐς Δελφοὺς ἰέναι, τοὺς δὲ ἐς Ἄβας τὰς Φωκέων, τοὺς δὲ ἐς Δωδώνην· οἱ δέ τινες ἐπέμποντο παρά τε Ἀμφιάρεων καὶ παρὰ Τροφώνιον, οἱ δὲ τῆς Μιλησίης ἐς Βραγχίδας.*

HERODOTOS I. 46.

State briefly such results as may be known to you of modern archaeological explorations carried on at any of the sites named in the above passage.

3. Translate:

τὸ δὲ ἀπὸ τούτου μοι πρόεισιν ὁ λόγος ἔς τε τῶν ἀνδριάντων καὶ ἐς τῶν ἀναθημάτων ἐξήγησιν· ἀναμίξαι δὲ οὐκ ἀρεστὰ ἦν μοι τὸν ἐπ' αὐτοῖς λόγον. ἐν ἀκροπόλει μὲν γὰρ τῇ Ἀθήνῃσιν, οἵ τε ἀνδριάντες καὶ ὁπόσα ἄλλα, τὰ πάντα ἐστὶν ὁμοίως ἀναθήματα· ἐν δὲ τῇ Ἄλτει, τὰ μὲν τιμῇ τῇ ἐς τὸ θεῖον ἀνάκεινται, οἱ δὲ ἀνδριάντες τῶν νικώντων ἐν ἄθλου λόγῳ σφίσι καὶ οὗτοι δίδονται. τῶν μὲν δὴ ἀνδριάντων ποιησόμεθα καὶ ὕστερον μνήμην· ἐς δὲ τὰ ἀναθήματα ἡμῖν τραπήσεται πρότερον ὁ λόγος τὰ ἀξιολογώτατα αὐτῶν ἐπερχομένοις.

PAUSANIAS V. 21 1.

Define accurately, in connection with this passage, the meaning and usage of the words *ἀνδριάς*, *ἄγαλμα*, and *ἀνάθημα* severally. Give a brief account of the first introduction of *ἀνδριάντες* in Greek sculpture: and among extant works of early art, mention any of which it may be doubted whether they belong to this class or not.

4. Translate, explaining fully the epithets and allusions:

gloria Lysippost animosa effingere signa;
exactis Calamis se mihi iactat equis.

PROPERTIUS IV. 9 9, 10.

5. Translate:

πρὶν δὲ ἢ ἐς τὴν πόλιν ἐσελθεῖν μνῆμά ἐστι λευκοῦ λίθου, θέας καὶ ἐς τὰ ἄλλα ἄξιον καὶ οὐχ ἥκιστα ἐπὶ ταῖς γραφαῖς αἵ εἰσιν ἐπὶ τοῦ τάφου, τέχνη Νικίου, θρόνος τε ἐλέφαντος καὶ γυνὴ νέα καὶ εἴδους εὖ ἔχουσα ἐπὶ τῷ θρόνῳ, θεράπαινα δὲ αὐτῇ προσέστηκε σκιάδιον φέρουσα· καὶ νεανίσκος ὀρθὸς οὐκ ἔχων πω γένειά ἐστι χιτῶνα ἐνδεδυκὼς καὶ χλαμύδα ἐπὶ τῷ χιτῶνι φοινικῆν· παρὰ δὲ αὐτὸν οἰκέτης ἀκόντια ἔχων ἐστί, καὶ ἄγει κύνας ἐπιτηδείας θηρεύουσιν ἀνθρώποις.

PAUSANIAS VII. 22 6.

Explain the details of this monument: refer to any others of a kindred character which you may recollect, and indicate their place in the history of Greek art.

6. ἐκ ζωῆς με θεοὶ τεῦξαν λίθον, ἐκ δὲ λίθοιο
ζωὴν Πραξιτέλης ἔμπαλιν εἰργάσατο.

Anthol. Graec. IV. 298.

Indicate the subject of the work referred to in the above epigram, and discuss the other ancient authorities and the extant works of art which throw light on its character and authorship.

7. State briefly what is known of the history and the productions of the Pergamene school of art. Are there grounds for supposing the existence of contemporary and kindred schools in other cities of Asia Minor or the adjacent islands?

8. Translate and comment on the following passage, citing extant parallels, where possible, to the figures described:

ῥήξει γοῦν ὁ Ποσειδῶν τῇ τριαίνῃ τὰ ὄρη, καὶ πύλας τῷ ποταμῷ ἐργάσεται... Ἀγωνιζομένης δὲ πρὸς τὸ ἐναργὲς τῆς τέχνης, τὰ δεξιὰ τοῦ Ποσειδῶνος ὁμοῦ καὶ ὑπέσταλται καὶ προβέβηκε, καὶ ἀπειλεῖ τὴν πληγὴν οὐκ ἀπὸ τῆς χειρὸς ἀλλ' ἀπὸ τοῦ σώματος. γέγραπται δὲ οὐ κυάνεος, οὐδὲ θαλάττιος ἀλλ' ἠπειρώτης. τῷ τοι καὶ ἀσπάζεται τὰ πεδία, καὶ ὁμαλὰ ἰδὼν καὶ εὐρέα, καθάπερ θαλάττας, χαίρει. καὶ ὁ ποταμὸς οἷον αὖθις, καὶ φυλάττων τὸ ἐς ἀγκῶνα (ποταμῷ γὰρ ὀρθοῦσθαι οὐ σύνηθες) ἀνατίθεται τὸν Τιταρήσιον ὡς κοῦφον καὶ ποτιμώτερον, καὶ ὁμολογεῖ τῷ Ποσειδῶνι ἐκρυήσεσθαι τῶν πεδίων, ὁδῷ χρώμενος. ἀνίσχει καὶ ἡ Θετταλία, συνιζάνοντος ἤδη τοῦ ὕδατος, ἐλαίᾳ κομῶσα καὶ ἀστάχυϊ, καὶ πώλου ἐφαπτομένη συνανίσχοντος.

PHILOSTRATOS *Imag.* II. 15.

9. Translate:

Athenis nescio an primis omnium Harmodio et Aristogitoni tyrannicidis publice posuerint statuas; hoc actum est eodem anno, quo et Romae reges pulsi. excepta deinde res est a toto orbe terrarum humanissima ambitione et in omnium municipiorum foris statuae ornamentum esse coepere prorogarique memoria hominum et honores legendi aevo basibus inscribi, ne in sepulchris tantum legerentur. mox forum et in domibus privatis factum atque in atriis; honos clientium instituit sic colere patronos. togatae effigies antiquitus ita dicabantur. placuere et nudae tenentes hastam ab epheborum e gymnasiis exemplaribus, quas Achilleas vocant. Graeca res nil velare, at contra Romana ac militaris thoracas addere. Caesar quidem Dictator loricatam sibi dicari in foro suo passus est; nam lupercorum habitu tam noviciae sunt, quam quae nuper prodiere paenulis indutae.

PLINY XXXIV. 17 18.

Add critical and illustrative notes on Pliny's various statements.

10. What elements are original in the sculpture of Roman triumphal arches and columns? and what elements are borrowed from other peoples?

WEDNESDAY, *May* 28, 1884. 1.30—4.30.

MYTHOLOGY AND RELIGIOUS USAGE.

[*You are recommended to attempt, partially at least, not less than* **six** *of these questions, of which no. 7 should be one.*]

1. STATE, in reference to the under-mentioned Greek festivals, in honour of what divinities they were held; with what myths they were associated; and in what localities and with what distinctive rites they were celebrated. Isthmia, Skirophoria, Plynteria, Brauronia, Hyakinthia, Thargelia, Thesmophoria, Lenaia.

2. Explain and illustrate the following epithets of ancient divinities: *Ζεὺς πανομφαῖος, Ζεὺς μειλίχιος, Ζεὺς καθάρσιος, Ἥρη τελεία, Ἀθήνη ἀλέα, Ἀθήνη ἐργάνη, Ἀθήνη χαλκίοικος, Ἀπόλλων δελφίνιος, Ἀπόλλων βοηδρόμιος, Ἑρμῆς κουροτρόφος.*

3. Translate:

ἀμφί μοι Ἑρμείαο φίλον γόνον ἔννεπε, Μοῦσα,
αἰγιπόδην, δικέρωτα, φιλόκροτον, ὅστ' ἀνὰ πίση
δενδρήεντ' ἄμυδις φοιτᾷ χοροήθεσι νύμφαις,
αἴτε κατ' αἰγίλιπος πέτρης στείβουσι κάρηνα
Πᾶν' ἀνακεκλόμεναι, νόμιον θεὸν, ἀγλαέθειρον,
αὐχμήενθ', ὃς πάντα λόφον νιφόεντα λέλογχε
καὶ κορυφὰς ὀρέων καὶ πετρήεντα κέλευθα.
φοιτᾷ δ' ἔνθα καὶ ἔνθα διὰ ῥωπήϊα πυκνά,
ἄλλοτε μὲν ῥείθροισιν ἐφεζόμενος μαλακοῖσιν,
ἄλλοτε δ' αὖ πέτρῃσιν ἐν ἠλιβάτοισι διοιχνεῖ,
ἀκροτάτην κορυφὴν μηλοσκόπον εἰσαναβαίνων.

HOMER *Hymn. in Pan.* 1—11.

Discuss the ideas concerning Pan and his worship prevailing in the ancient world, and his representations in ancient art: distinguish the several characteristics of Pan, Seilenos, and Satyr.

4. Translate, and explain the beliefs and circumstances referred to:

εἴθε με παντοίοισιν ἔτι πλάζεσθαι ἀήταις,
ἢ Λητοῖ στῆναι μαῖαν ἀλωομένῃ.
οὐκ ἂν χητοσύνην τόσον ἔστενον. οἱ ἐμὲ δειλήν,
ὅσσαις Ἑλλήνων νηυσὶ παραπλέομαι,
Δῆλος ἐρημαίη, τὸ πάλαι σέβας. ὀψέ μοι Ἥρη
Λητοῦς, ἀλλ' οἰκτρὴν τήνδ' ἐπέθηκε δίκην.

Anthol. II. 408.

5. Translate;

ΚΑΡΙΩΝ. *τί δῆτ' ἂν εἴης ὄφελος ἡμῖν ἐνθάδ' ὤν;*
ΕΡΜΗΣ. *παρὰ τὴν θύραν στροφαῖον ἱδρύσασθέ με.*
Κ. *στροφαῖον; ἀλλ' οὐκ ἔργον ἔστ' οὐδὲν στροφῶν.*
Ε. *ἀλλ' ἐμπολαῖον.* Κ. *ἀλλὰ πλουτοῦμεν· τί οὖν*
Ἑρμῆν παλιγκάπηλον ἡμᾶς δεῖ τρέφειν;
Ε. *ἀλλὰ δόλιον τοίνυν.* Κ. *δόλιον; ἥκιστά γε·*
οὐ γὰρ δόλου νῦν ἔργον, ἀλλ' ἁπλῶν τρόπων.
Ε. *ἀλλ' ἡγεμόνιον.* Κ. *ἀλλ' ὁ θεὸς ἤδη βλέπει,*
ὥσθ' ἡγεμόνος οὐδὲν δεησόμεσθ' ἔτι.
Ε. *ἐναγώνιος τοίνυν ἔσομαι.*

ARISTOPHANES *Plutus* 1152—1162.

Comment on the various titles proposed by Hermes, mentioning any works of art in which the ideas embodied in any of them seem to have guided the artist.

6. Translate, with explanatory notes on the subject-matter:

καὶ τὴν ὁδὸν ἐὰν ὑπερδράμῃ γαλῆ, μὴ πρότερον πορευθῆναι ἕως διεξέλθῃ τις, ἢ λίθους τρεῖς ὑπὲρ τῆς ὁδοῦ διαβάλῃ· καὶ ἐὰν ἴδῃ ὄφιν ἐν τῇ οἰκίᾳ, †ἐὰν μὲν παρείαν, Σαβάζιον καλεῖν, ἐὰν δὲ ἱερὸν,† ἐνταῦθα ἱερὸν εὐθὺς ἱδρύσασθαι.

THEOPHRASTOS *Περὶ δεισιδαιμονίας.*

7. Translate:

(*α*) . . . . . .

ΕΓΕΡΩΤΑΙΤΙΜΟΘΕΟΣΤΟΝΘΕΟΝΓΟΤΕΡΟΝ
ΑΥΤΩΙΛΩΙΟΝΚΑΙΑΜΕΙΝΟΝΕΣΤΙΝΑΙΤΗΣΑΣΘΑΙ
ΤΑΝΓΟΛΙΝΕΝΤΩΙΕΓΙΝΟΕΙΤΟΓΩΙΕΝΤΩΙΤΟΥ
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ΗΕΝΤΩΙΙΕΡΩΙΤΟΥΑ · · · ΑΓΙΟΥΕΝΩΙΕΓΙΝΟΕΙ
ΤΟΓΩΙΟΘΕΟΣΕΧΡΗΣΕΑΙΤΗΣΑΣΘΑΙΕΝΤΩΙΤΟΥ
ΑΓΟΛΛΩΝΟΣ . . . . . .

RHANGABE *Ant. Hell.* No. 820 (from Anaphe).

(*β*) . . . . . ΕΑΝΔΕΤΙΣΘΥΗΙ
ΤΗΙΘΕΩΙΤΩΝΟΡΓΕΩΝΩΝΟΙΣΜΕΤΕΣΤΙΝΤΟΥΙΕΡΟΥΑΤΕΛΕΙΣΑΥΤΟΥΣΘΥΕΙΝ
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· ΑΙΤΟΔΕΡΜΑΚΑΙΚΩΛΗΝΔΙΑΝΕΚΗΔΕΞΙΑΝΤΟΥΔΕΤΕΛΕΟΥ : ΙΙΙ : ΚΑΙΔΕΡΜΑΚΑΙ
· ΩΛΗΝΚΑΤΑΤΑΥΤΑΒΟΟΣΔΕ : CI : ΚΑΙΤΟΔΕΡΜΑΔΙΔΟΝΑΙΔΕΤΑΙΕΡΩΣΥΝΑΤΩ·
ΜΕΝΘΗΛΕ · · ΝΤΗΙΙΕΡΕΑΙΤΩΝΔΕ · · ΡΕΝΩΝΤΩΙΙΕΡΕΙΓΑΡΑΒΩΜΙΑΔΕΜΗ
· · ΕΙΝΜΗΔΕΝΑΕΝΤΩΙΙΕΡΩΙΗΟΦΕΙΛΕ · ΝΓΔΡΑΧΜΑΣ . . . . . .

FOUCART *Associations relig. en Grèce* (from the Piraeus).

Add a short commentary on the subject-matter of these inscriptions.

8. (*α*) maiores enim nostri sedentes epulabantur. SERVIUS.

(*β*) libri Sibyllini ex senatus consulto aditi sunt. duumviri sacris faciundis, lectisternio tunc primum in urbe Romana facto, per dies octo Apollinem Latonamque, Dianam et Herculem, Mercurium atque Neptunum tribus, quam amplissime tum apparari poterat, stratis lectis placavere. LIVY v. 13.

Can these passages be reconciled? What was the character of the Sibylline books? What were lectisternia and how did they originate? Give reasons for the selection of these deities in particular.

9. Explain the light thrown on early Roman religion by the following passages:

(*α*) Aio Locutio templum propter caelestem vocem exauditam in nova via iussimus fieri. LIVY v. 52.

(*β*) eundem esse Genium et Larem multi veteres memoriae prodiderunt, in queis etiam Granius Flaccus in libro quem ad Caesarem de indigitamentis scriptum reliquit. CENSORINUS.

(*γ*) semper ista audita sunt eadem, penes vos auspicia esse, vos solos gentem habere. LIVY x. 8.

10. in sacris simulata pro veris accipi. SERVIUS.

Give instances of this tendency from Greek and Roman religious customs, sacrifice, for instance, or the burial of the dead.

THURSDAY, *May* 29, 1884. 9—12.

[*You are recommended to attempt, partially at least, not less than* four *of the questions set in each part of this paper.*]

A.

OLYMPIA.

1. DRAW a sketch plan of the Altis, showing the relative positions of its various buildings, as brought to light by recent excavations.

2. Give a brief account of the history of Olympia, its institutions and its monuments, from the first to the seventh century A.D.

3. Translate and explain:

Τυνδαρίδαις τε φιλοξείνοις ἀδεῖν καλλιπλοκάμῳ θ' Ἑλένᾳ
κλεινὰν Ἀκράγαντα γεραίρων εὔχομαι,
Θήρωνος Ὀλυμπιονίκαν ὕμνον ὀρθώσαις, ἀκαμαντοπόδων
ἵππων ἄωτον. Μοῖσα δ' οὕτω τοι παρέστα μοι νεοσίγαλον εὑρόντι τρόπον
Δωρίῳ φωνὰν ἐναρμόξαι πεδίλῳ
ἀγλαόκωμον· ἐπεὶ χαίταισι μὲν ζευχθέντες ἔπι στέφανοι
πράσσοντί με τοῦτο θεόδματον χρέος,
φόρμιγγά τε ποικιλόγαρυν καὶ βοὰν αὐλῶν ἐπέων τε θέσιν
Αἰνησιδάμου παιδὶ συμμίξαι πρεπόντως, ἅ τε Πίσα με γεγωνεῖν· τᾶς ἄπο
θεύμοροι νίσοντ' ἐπ' ἀνθρώπους ἀοιδαί,
ᾧ τινι κραίνων ἐφετμὰς Ἡρακλέος προτέρας
ἀτρεκὴς Ἑλλανοδίκας γλεφάρων Αἰτωλὸς ἀνὴρ ὑψόθεν
ἀμφὶ κόμαισι βάλῃ γλαυκόχροα κόσμον ἐλαίας, τάν ποτε
Ἴστρου ἀπὸ σκιαρᾶν παγᾶν ἔνεικεν Ἀμφιτρυωνιάδας,
μνᾶμα τῶν Οὐλυμπίᾳ κάλλιστον ἀέθλων,
δᾶμον Ὑπερβορέων πείσαις Ἀπόλλωνος θεράποντα λόγῳ.

PINDAR *Ol.* III. 1—16.

4. *τὰς θύρας δὲ εἰσιόντι τὰς χαλκᾶς, ἔστιν ἐν δεξιᾷ πρὸ τοῦ κίονος Ἴφιτος ἀπὸ γυναικὸς στεφανούμενος Ἐκεχειρίας.* PAUSANIAS V. 10 3.

State fully the historical and allegorical signification of the group in question.

5. *τὰ μὲν δὴ ἔμπροσθεν ἐν τοῖς ἀετοῖς ἔστι Παιωνίου, γένος ἐκ Μένδης δὴ τῆς Θρᾳκίας.* PAUSANIAS V. 10 2.

Describe the composition referred to, and discuss the artistic character of Paionios in the light of these and any other works by him which may be known to you.

6. What were the architectural peculiarities of the Heraion, and what were the principal works of art which it contained? Discuss in some detail any one of such works you choose.

7. *θεασάμενος δὲ καὶ τούτους, ἐπὶ τῶν Ῥοδίων ἀθλητῶν ἀφίξῃ τὰς εἰκόνας, Διαγόραν καὶ τὸ ἐκείνου γένος.* PAUSANIAS VI. 7 1.

State what you know of the achievements and fortunes of the several members of the family in question, and of their place in the history of Greek athletics.

8. Translate and comment on the following inscriptions found at Olympia, transcribing (*β*) and (*γ*) in cursive text, and restoring where necessary:

(*a*) ΕΛΛΗΝΩΝΗΡΧΟΝΤΟΤΕΟΛΥΜΠΙΑΙΗΝΙΚΑΜΟΙΞΕΥΣ
ΔΩΚΕΝΝΙΚΗΣΑΙΠΡΩΤΟΝΟΛΥΜΠΙΑΔΑ
ΙΠΠΟΙΣΑΘΛΟΦΟΡΟΙΣΤΟΔΕΔΕΥΤΕΡΟΝΑΥΤΙΣΕΦΕΞΗΣ
ΙΠΠΟΙΣΥΙΟΣΔΗΝΤΡΩΙΛΟΣΑΛΚΙΝΟΟ

Arch. Zeit. 1880 p. 145.

(β) ΣΓΑΡΤΑΣΜΕΝ
ΓΑΤΕΡΕΣΚΑΙΑΔΕΛΦΟΙ
ΝΙΚΩΣΑΚΥΝΙΣΚΑΕΙΚΟΝΑΤΑΝΔΕΣΙΑΕΜΟΝ
ΔΕΜΕΦΑΜΙΓΥΝΑΙΚΩΝΕΛΛΑΔΟΣΕΚΓΑΣΑΣΤΟ
ΔΕΛΑΒΕΝΣΤΕΦΑΝΟΝ

Arch. Zeit. 1880 p. 151.

(γ) ΣΥΝΘΕΝΑΘΕΡΟΝ····
ΑΙΥΜΑΝΟΡΙΓΑΡΤΑΡ
ΓΑΡΤΑΡΕΝΣΑΛΑΜΟ
ΝΑΙΓΛΕΘΡΟΝΟΓΤΟΚΑΙ
ΔΕΚΑΦΑΡΕΝΚΡΙΘΑΝΜΑ
ΝΑΣΙΟΣΔΥΟΚΑΙΓΙΚΑΤΙΑΛ
ΦΙΟΙΟΜΕΝΟΡΑΙΔΕΛΙΓΟΙΛΥ
ΣΑΣΤΟΤΟΔΙΦΥΙΟΓΕΓΑΣΤΟ
ΤΟΝΓΑΝΤΑΨΡΟΝΟΝ

ROEHL *C. I. A.* No. 121.

B.

THE PALATINE AND THE VELIA.

1. Give the various derivations current in antiquity of the name Palatinus, and shew for what reasons this hill was preferred to surrounding elevations by the early inhabitants of the district.

2. quod pomoerium Romulus posuerit noscere haud absurdum reor. igitur a foro boario ubi aereum tauri simulacrum aspicimus, quia id genus animalium aratro subditur, sulcus designandi oppidi coeptus, ut magnam Herculis aram amplecteretur. inde certis spatiis interiecti lapides per ima montis Palatini ad aram Consi, mox ad Curias veteres, tum ad sacellum Larium forumque Romanum. TACITUS *Ann.* XII. 24.

Trace by means of a map or otherwise the line mentioned by Tacitus and determine where possible the sites he mentions.

3. fossa fit ad solidum: fruges iaciuntur in ima
et de vicino terra petita solo.
fossa repletur humo, plenaeque imponitur ara,
et novus accenso fungitur igne focus. OVID *Fasti* IV. 821.

What is the object and meaning of this ceremony? With what spot on the Palatine was it connected?

4. Describe the character of the remains commonly known as the 'Palatine Stadium', and discuss their date and purpose.

5. To whom has the private house adjoining the palace of Tiberius been assigned and on what grounds? In what respects does it follow Roman and in what respects Greek ideas in its interior arrangements?

6. Translate and explain:

inde tenore pari gradibus sublimia celsis
ducor ad intonsi candida templa dei;
signa peregrinis ubi sunt alterna columnis
Belides, et stricto barbarus ense pater;
quaeque viri docto veteres cepere novique
pectore, lecturis inspicienda patent. OVID *Tristia* III. 1.

7. Give the history of the original erection and subsequent disfiguration of the arch of Titus. Describe the relief on the south side of the interior of that arch.

8. Describe by the aid of monuments and statements of ancient writers the temple of Venus and Rome erected by Hadrian, mentioning the sources whence the details of the statue of Roma in it may probably have been borrowed.

THURSDAY, *May* 29, 1884. 1.30—4.30.

ANTIQUITIES.

[*You are recommended to attempt, at least partially, not less than* **six** *of these questions, of which no.* 9 *should be one.*]

1. INDICATE any peculiarities in the shapes and decoration of early Greek vases which indicate that they are copies of vessels in other materials, wicker-work for instance, or metal.

2. Translate:

αἱ δὲ εἰκόνες αἱ τοῖς κατασκευάσμασι τοῖς περιφερέσιν ἐγκειμέναι, ἡ μὲν τοῦ ἠλέκτρου βασιλέως Ῥωμαίων ἐστίν Αὐγούστου, ἡ δὲ τοῦ ἐλέφαντος, βασιλέως Νικομήδους ἐλέγετο εἶναι Βιθυνῶν....τὸ δὲ ἤλεκτρον τοῦτο, οὗ τῷ Αὐγούστῳ πεποίηνται τὴν εἰκόνα, ὅσον μὲν αὐτόματον ἐν τοῦ Ἠριδανοῦ ταῖς ψάμμοις εὑρίσκεται, σπανίζεται τὰ μάλιστα, καὶ ἀνθρώπῳ τίμιον πολλῶν ἐστιν ἕνεκα· τὸ δὲ ἄλλο ἤλεκτρον, ἀναμεμιγμένος ἐστὶν ἀργύρῳ χρυσός. PAUSANIAS V. 12 4—6.

Discuss the use made of either kind of *ἤλεκτρον* in Greek arts and handicrafts.

3. *οὐ πολὺς χρόνος, ἐπειδὴ χιτῶνάς τε λινοῦς ἐπαύσαντο φοροῦντες καὶ χρυσῶν τεττίγων ἐνέρσει κρωβύλον ἀναδούμενοι τῶν ἐν τῇ κεφαλῇ τριχῶν. ἀφ' οὗ καὶ Ἰώνων τοὺς πρεσβυτέρους κατὰ τὸ ξυγγενὲς ἐπιπολὺ αὕτη ἡ σκευὴ κατέσχε.*

Criticize this statement of Thucydides as to the Athenians, especially in the light of existing works of art.

4. (*α*) Write out in cursive text and translate, with brief notes:—

ΓΑϟΔϟΟΜΕΚΓΗΑΝΤΟϟΔΕΚΜΑϟΤΟΔΑΜΕΝΓΗΕΜΑΤΑΡΜΑ
ΜΟϟΤΑΡΕΓΕΥΚΗΟΜΕΝΟΜΤΟΥΤΕΤΕΡΜΜΕΤΡΟΓΗΟΝ

ROEHL *I. G. A.* No. 412.

(*β*) Translate:

..ΑΘΗΙΤΥΧΗΙ...ΟΝΟΜΟΥΝΤΟΣ
ΔΗΜΗΤΡΙΟΥΜΗΝΟΣΘΑΡΓΗΛΙΩΝΟΣ
ΔΕΥΤΕΡΑΙΑΛΕΞΩΝΔΑΜΩΝΟΣΕΙ
ΠΕΝΝΟΜΟΝΕΙΝΑΙΓΑΜΒΡΕΙΩΤΑΙΣ
ΤΑΣΠΕΝΘΟΥΣΑΣΕΧΕΙΝΦΑΙΑΝΕΣΘ·
ΤΑΜΗΚΑΤΤΕΡΡΥΠΩΜΕΝΗΝΧΡΗΣΘΑΙ
ΔΕΚΑΙΤΟΥΣΑΝΔΡΑΣΚΑΙΤΟΥΣΠΑΙΔΑΣ
ΤΟΥΣΠΕΝΘΟΥΝΤΑΣΕΣΘΗΤΑΦΑΙΑΙ
ΕΑΜΜΗΒΟΥΛΩΝΤΑΙΛΕΥΚΗΙΕΠΙΤΕ
ΛΕΙΝΔΕΤΑΝΟΜΙΜΑΤΟΙΣΑΠΟΙΧΟΜΕ
ΝΟΙΣΕΣΧΑΤΟΝΕΝΤΡΙΣΜΗΣΙΝΤΩΙΔ·
ΤΕΤΑΡΤΩΙΛΥΕΙΝΤΑΠΕΝΘΗΤΟΥΣΑΝ
ΔΡΑΣΤΑΣΔΕΓΥΝΑΙΚΑΣΤΩΙΠΕΜΠΤΩΙ
ΚΑΙΕΞΑΝΙΣΤΑΣΘΑΙΕΚΤΗΣΚΗΔΕΙΑΣ
ΚΑΙΕΚΠΟΡΕΥΕΣΘΑΙΤΑΣΓΥΝΑΙΚΑΣΗ
ΤΑΣΕΞΟΔΟΥΣΤΑΣΕΝΤΩΙΝΟΜΩΙΓΕ
ΓΡΑΜΜΕΝΑΣΕΠΑΝΑΓΚΟΝΤΟΝΔΕΓΥ
ΝΑΙΚΟΝΟΜΟΝ.... κ.τ.λ.

C. I. G. No. 3562.

Compare the customs here mentioned with those obtaining in some other Greek state. What were usually the duties of the magistrate mentioned in the last line?

5. Translate, with explanations where required:

τῆς δὲ κοπίδος μνημονεύει καὶ Ἀριστοφάνης ἢ Φιλύλλιος ἐν ταῖς Πόλεσιν, Ἐπίλυκός τ' ἐν Κωραλίσκῳ, λέγων οὕτως· "ποτταὶν κοπίδ' οἰώσομαι ἐν Ἀμυκλαῖον. παραγγέλλωσι βάρακες πολλοὶ κἄρτοι καὶ σδωμὸς μάλα ἀδύς." διαῤῥήδην λέγων μάζας ἐν ταῖς κοπίσι παρατίθεσθαι, (τοῦτο γὰρ οἱ βάρακες δηλοῦσιν, οὐχὶ τολύπας, ὥς φησι Λυκόφρων, ἢ τὰ προφυράματα τῶν μαζῶν, ὡς Ἐρατοσθένης) καὶ ἄρτους δὲ καὶ ζωμόν τινα καθηδυσμένον περιττῶς. τίς δ' ἔστιν ἡ κοπὶς, σαφῶς ἐκτίθεται Μόλπις ἐν τῇ Λακεδαιμονίων πολιτείᾳ, γράφων οὕτως· "ποιοῦσι δὲ καὶ τὰς καλουμένας κοπίδας. ἔστι δ' ἡ κοπὶς δεῖπνον, μᾶζα, ἄρτος, κρέας, λάχανον ὠμὸν, ζωμὸς, σῦκον, τράγημα, θέρμος." ἀλλὰ μὴν οὐδ' ὀρθαγορίσκοι λέγονται, ὥς φησιν ὁ Πολέμων, οἱ γαλαθηνοὶ χοῖροι, ἀλλ' ὀρθραγορίσκοι, ἐπεὶ πρὸς τὸν ὄρθρον πιπράσκονται, ὡς Περσαῖος ἱστορεῖ ἐν τῇ Λακωνικῇ πολιτείᾳ, καὶ Διοσκουρίδης ἐν δευτέρῳ πολιτείας, καὶ Ἀριστοκλῆς ἐν τῷ προτέρῳ καὶ οὗτος τῆς Λακώνων πολιτείας.

ATHENAEUS IV. 17.

6. Explain fully, having regard both to the construction of Greek houses and to Greek domestic manners: and mention any exceptions to the rule stated in the last two lines:

τοὺς τῆς γαμετῆς ὅρους ὑπερβαίνεις, γύναι,
τὴν αὐλίαν· πέρας γὰρ αὔλιος θύρα
ἐλευθέρᾳ γυναικὶ νενόμιστ' οἰκίας. MENANDER *Hiereia* fr. 2.

7. Give some account of the gradual introduction of portraits on Greek and on Roman coins.

8. What were the principal apartments in the large Roman baths? and what the processes of bathing?

9. Carefully describe the Greek and Roman coins of which casts are set before you, marked A, B, C, D, E, F, G, H respectively. Assign their date and place of mintage, and briefly notice anything remarkable about them.

10. Translate, with explanatory notes:

(*a*)

SILVANO SACRVM SODAL
EIVS ET LARVM DONVM
POSVIT TI CLAVDIVS AVG
LIB · FORTVNATVS · A
CVRA AMICORVM
IDEMQVE DEDICAVIT
ET EPVLVM DEDIT
DECVRIS N · IIII
K · AVGVSTIS · C · MINI
CIO · FVNDANO · ET
C · VETTENNIO SE
VERO · COS ·

C. I. L. VI. No. 630.

(*β*)

M · AVREL · AVG · LIB · AGILIO SEPTENTRIONI PANTOMIMO
SVI TEMPORIS PRIMO · SACERDOTI SYNHODI · APOLLINIS
PARASITO · ALVMNO FAVSTINAE AVG · PRODVCTO AB IMP ·
M AVREL · COMMODO ANTONINO PIO FELICE AVGVSTO ·
ORNAMENTIS DECVRIONAT · DECRETO ORDINIS
EXORNATO ET ALLECTO INTER IVVENES S · P · Q
LANIVINVS ..... IDVS COMMODAS .....

ORELLI No. 884.

FRIDAY, *May* 30, 1884. 9—12.

WRITE an Essay on one of the following subjects;

1. The principles of pedimental composition in Greek sculpture, as illustrated by extant and recorded examples.

2. The character and functions of art under Pericles compared with its character and functions under Augustus.

3. The characteristics of the two celebrations referred to in the following passage, and the reasons which led Pausanias to give them pre-eminence:

πολλὰ μὲν δὴ καὶ ἄλλα ἴδοι τις ἂν Ἕλλησι, τὰ δὲ καὶ ἀκοῦσαι θαύματος ἄξια· μάλιστα δὲ τοῖς Ἐλευσῖνι δρωμένοις καὶ ἀγῶνι τῷ ἐν Ὀλυμπίᾳ μέτεστιν ἐκ θεοῦ φροντίδος. PAUSANIAS V. 10 1.

4. The relation of ancestor-worship to the cultus of deities in Greece and in Rome.

5. The rise and decay of the use of bronze in antiquity, especially as shewn in the results of excavations on classical soil.

6. The various kinds of brick-work and stone-work to be traced in the buildings of Rome, with dates.

SECTION E.

SATURDAY, *May* 31, 1884. 9—12.

[*Full credit may be obtained by sufficient answers to* **seven** *questions, but you are at liberty to attempt a greater number.*]

1. CERTAIN roots have as their initial sound in Sk. *c* (ch), in Gr. *τ*, *π*, in Italic *qu*, *p*, in Celtic *c* (k), in Lith. *k*. Certain others have in Sk. *ç*, in Lithu-Slav. *sz*, *s*, in Gr. and Lat. *κ*, *c*. Both of these groups have been referred to an original *k*-sound. Discuss this question, giving illustrative examples, and consider whether the hypothesis of such a series of changes derives any support from phonetic tendencies observable in Greek and Latin.

2. (*a*) Describe the physiological nature of the sounds represented by Ϝ and *β* in Greek. (*b*) Is there any reason to suppose that the sound of the former symbol varied according to its grouping with other sounds? (*c*) What predisposing influences were there in Greek for the passage of Ϝ to *β*? (*d*) Give examples of such cases and of others which cannot be so accounted for. (*e*) Enumerate and illustrate the other substitutes for original Ϝ in Greek.

3. It has been maintained that the *o* of (*e.g.*) *γέγονα, στολμός, βροντή, ἔχομεν* and the *o* of (*e.g.*) *πόσις, ὄζω* are essentially different in origin and cannot both be the descendants of the same original Indo-European sound. Discuss this view.

4. Describe the process known as 'vowel-intensification' in Greek and Latin. To what extent may the Sanskrit Guṇa and Vṛiddhi be considered parallel? State and criticise any theories which have been advanced to account for the phenomena manifested.

5. Analyse minutely the following words. Note (1) the distinction between radical and formative elements, (ii) the special peculiarities of vocalism, (iii) exceptional changes of sound, (iv) cognates in Greek or kindred languages, (v) remarkable transitions of meaning.

δέρη—ἔρχομαι—μέδιμνος—ποινή—θυγατριδοῦς—νεικείεσκε—δίαιτα—ὑφήφασμαι.

6. (*a*) Shew by examples how far an older case-system may be reconstructed in Greek from forms and parts of speech classed as 'indeclinable.' (*b*) Deduce from these or other examples, so far as is possible, the earliest Greek forms of the case-suffixes. (*c*) Explain the divergence between the A- and O- stems on the one hand and the consonantal stems on the other in their treatment of the plural nominative case-suffix. Discuss, so far as concerns the case-endings and their phonetic attachment to the stem, the following dialectical forms: *ἔξοι* (Cretan), *εὐεργετές* (Thess.), *ἵππυς* (Boeot.), *Θεοκκώ* (Boeot.), *ἔντασσι* (Heracl.), *ὄρθοις* (Lesb.).

7. (i) What chronological strata may be distinguished in the growth and development of the Greek verbal forms? Examine the worth of any objections which have been made to the derivation (*a*) of the personal endings from pronominal stems, (*b*) of the 'secondary' endings from the 'primary' and not *vice versa*.

(ii) What special verbal formations in Greek appear to have been adopted to express respectively an iterative, a desiderative, an intensive and a frequentative sense? How far are corresponding formations found in Sanskrit and Latin?

8. Translate, adding etymological notes especially on such forms as may help to determine the dialects and the affinities of the dialects in which the inscriptions are severally written:

(*a*) *ὀμνύω δὲ | τὸς αὐτὸς θεούς· ‖ ἢ μὰν ἐγὼ τὸγ κό|σμον, αἴ κα μὴ ἐξορ|κί-ξωντι τᾶν ἀγε|λᾶν τοὺς τόκα ἐ(γ)|γ(ιν)ομένους τὸν ‖ αὐτὸν ὅρκον, τόν | περ ἁμὲς ὁμωμό|καμες, ἐμβαλεῖν | ἐς τὰν βωλάν, αἴ | κα ἀποστᾶντι, ‖ τοῦ μηνὸς τοῦ Κο|μνο-καρίου ἢ τοῦ | Ἀλιαίου· ἁ δὲ βωλὰ | πραξάντων ἕκα|στον τὸν κοσμί‖ οντα στατήρας | πεντακοσίους, | ἀφ' ἃς κα ἐμβαλῇ | ἁμέρας, ἐν τριμήνῳ. | αἱ δὲ λισσὸς εἴη, (?) ‖ ἀγγρα-ψάντων | ἐς Δελφίνιον, | ὅσσα κα μὴ πρά|ξωντι χρήματα, | τοὔνομα ἐπὶ πατρὸς ‖ καὶ τὸ πλῆθος τοῦ ἀρ|γυρίου ἐξονομαινόν|τες· ὅτι δέ κα πράξων|τι, ταῖς ἑταιρείαισιν | δασ-σασθώσαν ταῖς ‖ ἐμπόλει, καὶ αἴ πεί | τινες ἐνουρεύωντι Δρηρίοι.*

(*b*) τὸνκαλειμένοι τὰν δίκαν δόμεν τὸν ἀρ|χὸν, ἐν τριάϙοντ' ἀμάραις δόμεν, αἴ κα τριάϙοντ' ἀμάραι λείποντ|αι τᾶς ἀρχᾶς· αἴ κα μὲ διδοῖ τοῖ ἐνκαλειμένοι τὰν δίκαν, ἄτιμ|ον εἶμεν καὶ χρέματα παματοφαγεῖσται. τὸ μέρος μετὰ ϝο|ικιατῶν διομόσαι ὅρϙον τὸν νόμιον· ἐν (')υδρίαν τὰν ψάφιξ.ξιν εἶμεν κάττὸ θέθμιον. [Cauer² εἶμεν. Καὶ τὸ...]

(*c*) κάς πα εὐϝρητάσατυ βασιλεὺς
κὰς ἁ πτόλις Ὀνασίλῳ κὰς τοῖς κασιγνή-
τοις ἀ(ν)τὶ τῶ μισθῶν κὰ' ἀ(ν)τὶ τᾶ ὑχήρων δοϝέναι
ἐξ τῷ ϝοίκῳ τῷ βασιλέϝος κὰς ἐξ τᾷ πτό-
λιϳι ἀργύρω τά(λαντον) ἢ δυϝάνοι νυ ἀ(ν)τὶ τῶ ἀργύρων
τῶδε τῶ ταλά(ν)των βασιλεὺς κὰς ἁ πτόλις Ὀνασίλῳ
κὰς τοῖς κασιγνήτοις ἀπὺ τᾷ ζᾷ τᾷ βασι-
λέϝος τᾶ ἰ(ν) τῶ ἱρῶνι τῷ Ἀλα(μ)πριϳάτᾳ τὸ(ν) χῶρον, [Cauer² τῷ ῥωνὶ(?)]
τὸν ἰ(ν) τῷ ἕλει, τὸ(ν) χραυόμενον Ὕκα(ν)τος ἄλϝω(?) [Cauer² ἀλαϝῶ]
κὰς τὰ τέρχνιϳα τὰ ἐπιό(ν)τα πά(ν)τα, ἔχεν πανώ-
νιον ὕϝαις ζᾶν ἀτελῆν.

(*d*) Τὰς γέας καὶ τὰς οἰκιέα[ς](?) | ἐπρίαντο· τῶν Ἀννικῶ πα[ί]||δων Ἰκέσιος Ἡγε-πόλιος [π]|εντακισχειλίων τριηκ[ο]σίων τεσσ[αρ]ακόντων· Ἀθ[η]||ναγ[ό]ρ[η]ς Ἡροδότο(υ) χε[ι]λί[ω]|ν ἑπτακοσίων· Θαργήλεο[ς], | Φιλοκλῆς Ζηνοδότο(υ) τᾶν [Ε]|ὐάδησιν δισχειλίων ἑ[π]|τακοσίων· [Θ]εό[π]ρ[ο]πος κ' Ο[ἰ]||ν[ο]πίδης τᾶγ Καμινήῃ χ[ε|ι]λίων καὶ [ὀ]κτακο-σίων [ἑπ]|τά· Κήφιος τὰ ἐμ Μελαίν[ῃ] | Ἀκτῇ τρισχε(ι)λίων ἑπτακ|οσίων ἐνενηκόντων.

9. (*a*) Examine the various usages of the Greek genitive, distinguishing those which from the first belonged to the case and those which are later accretions.

(*b*) The genitive has been supposed by some to have derived its origin from the subject or object of the clause, by others to have been originally adjectival. Criticise these views.

10. Comment on any noteworthy peculiarities of syntax in the following and suggest explanations of difficulties:

(*a*) διὰ τὸ ἤδη φοβεροὺς παρόντας Ἀθηναίους. THUC. IV. 63.

(*b*) εἰ τοίνυν ἂν ἐμοὶ τότε ὠργίζεσθε ... πῶς οὐχὶ νῦν προσήκει; DEM. 50. 67.

(*c*) μὴ μνηστεύσαντες μηδ' ἄλλοθ' ὁμιλήσαντες
ὕστατα καὶ πύματα νῦν ἐνθάδε δειπνήσειαν. HOM. *Od.* IV. 684.

(*d*) τὸ δ' ὑπήκοον τῶν ξυμμάχων μέγιστον μὲν περὶ τῆς αὐτίκα ἀνελπίστου σωτηρίας, ἢν μὴ κρατῶσι, τὸ πρόθυμον εἶχον, ἔπειτα δὲ ἐν παρέργῳ καὶ εἴ τι ἄλλο ξυγκαταστρεψαμένοις ῥᾷον αὐτοῖς ὑπακούσεται. THUC. IV. 69.

(*e*) οὐ οἱ μετέχω θράσεος. PIND. *P.* II. 83.

(*f*) κατὰ μὲν τὴν οὐσίαν καὶ τὸν λόγον τὸν τί ἦν εἶναι λέγοντα μεσότης ἐστὶν ἡ ἀρετή. AR. *Eth. N.* II. 6. 17.

(*g*) *Oed.* ἀρκτέον γ' ὅμως. | *Kr.* οὗτοι κακῶς γ' ἄρχοντος. SOPH. *O. T.* 628.

(*h*) οἶσθ', ὦ ξέν', ὡς νῦν μὴ σφαλῇς. SOPH. *O. C.* 75.

(*i*) λέγω δὲ ὡς εἶναι ταῦτα σμικρὰ μεγάλοισι συμβαλεῖν. HERODOT. IV. 99.

(*j*) τὸ γὰρ ποθοῦν ἕκαστος ἐκμαθεῖν θέλων
οὐκ ἂν μεθεῖτο. SOPH. *Phil.* 196.

(*k*) ὡς εἶδε περικειμένους ψέλια χρυσᾶ. PLUT. *Them.* XVIII.

(*l*) τέκν' εἰ φανέντ' ἄελπτα μηκύνω λόγον. SOPH. *O. C.* 1120.

11. (*a*) Give the substance of Madvig's remarks upon the use of the aorist infinitive for the future after verbs of saying, predicting and the like. With which of the following is it allowable? χρῆν, 'predict'—εἰκός ἐστιν—ἐν ἐλπίδι εἰμί—ἐλπίζω—προσδοκῶ.

(*b*) Give Cobet's remarks upon the meaning or use of ἐμφαγεῖν—ψυχαγωγεῖν—ἁρπάζειν, ἀναρπάζειν, διαρπάζειν—ἄσις, ἄση—πατρικός, πάτριος, πατρῷος—πρότερος, προτεραῖος—γελοῖος, καταγέλαστος—φρονεῖν, φρόνημα, φρόνησις.

(*c*) Enumerate the forms in use in Classical Greek of the verbs for 'selling.'

MONDAY, *June* 2, 1884. 9—12.

[*Full credit may be obtained by sufficient answers to* six *questions; but you are not prohibited from attempting a greater number.*]

I. (1) EXPLAIN the physiological production of the Latin *F* and *H* and of the Indo-European sounds from which they are descended. Show how your explanation throws light upon the history of the sound-changes. (2) Quote examples in illustration of these changes. (3) Compare the development of the same or similar sounds in other Indo-European languages with which you are acquainted. (4) Write notes on the derivation and spelling of the following words—*rufus—friuolus—fores—harena—hircus—traho—pulcher—herus—Panhormus.*

II. (1) What is meant by 'progressive' and 'regressive' assimilation respectively? Is there any objection to the use of these expressions? (2) 'It (viz. Corssen's explanation of the *ss* of the superlative) supposes a *progressive* assimilation whereas this is very rare indeed in Latin.....It is rare in other cognate languages too' (Roby, *Lat. Gr.* I. p. lxiv). Discuss the cases in which this change occurs, substantiating and accounting for its rarity. (3) What is the theory of Corssen referred to and what other arguments are there against it?

III. Analyse not more than *twelve* of the following words: (1) pointing out the root and the formative and inflexional suffixes, (2) explaining and illustrating the changes which they have undergone, and (3) giving cognates from other languages: *bimus—feruefucere—dulciora—quicquid—secundum—accipitrem—lien—meridies—adeps—uerbis—susurrans—radices—lupi* (gen.)—*libere* (adv.)—*munia—mansuetus—subtiliter—uapor—bruma—machinationes.*

IV. (1) What is the date of the '*Senatus Consultum*' about the Bacchanals? Where was it found? (2) Put into Classical Latin the following words and sentences from it, commenting on the archaic forms or usages and translating where necessary:

(*a*) BACAS · VIR · NEQVIS · ADIESE · VELET · CEIVIS · ROMANVS · NEVE · NOMINVS · LATIN(I).

(*b*) SI · QVES · ESENT · QVEI · ARVORSVM · EAD · FECISENT · QVAM · SVPRAD · SCRIPTVM · EST · EEIS · REMCAPVTALEM · FACIENDAM · CENSVERE.

(*c*) EAM · FIGIER · IOVBEATIS · VBEI · FACILVMED · GNOSCIER · POTISIT.

(*d*) OINVQRSEI—PLOVS—SENATUOS—IN · OQVOLTOD.

(3) Translate and explain the following inscription, and compare the forms with those in Latin or other Italian dialects:

SVAE · PIS · CONTRVD · EXEIC · FEFACVST · AVTI · COMONO · HIPVST · MOLTO · ETANTO · ESTVD · N · MM · INIM · SVAE · PIS · IONC · FORTIS · MEDDIS . MOLTAVM · HEREST · AMPERT · MINSTREIS · AETEIS · EITVAS · MOLTAS · MOLTAVM · LICITVD.

V. (1) Give with illustrations of each an account of the forms in which DIV, DI to shine occurs in Latin and examine their relation to each other. (2) How do you account for their multiplicity? (3) Compare the transformations of the same root in Greek. (4) Derive and comment on *Veiouis—leuir—Diana—nudius tertius.*

VI. (1) Translate with brief marginal notes where necessary:

quid uero licentius, quam quod hominum etiam nomina contrahebant, quo essent aptiora? nam ut duellum bellum et duis bis, sic Duellium eum, qui Poenos classe deuicit, Bellium nominauerunt, cum superiores appellati essent semper Duellii. quin etiam uerba saepe contrahuntur, non usus causa sed aurium. quomodo enim uester Axilla Ala factus est nisi fuga litterae uastioris? quam litteram etiam e maxillis et taxillis et uexillo et paxillo* consuetudo elegans Latini sermonis euellit. libenter etiam copulando uerba iungebant, ut sodes pro si audes, sis pro si uis. iam in uno capsis tria uerba sunt. ain pro aisne, nequire pro non quire, malle pro magis uelle, nolle pro non uelle, dein etiam saepe et exin pro deinde et exinde dicimus.

CIC. *Or.* 45, §§ 153, 154.

* *v. l.* pauxillo.

(2) Examine these etymologies of Cicero and correct them where erroneous. (3) What misconceptions of the nature of word-change does this passage reveal?

VII. (1) Give an account of the origin and history of the so-called 'passive' forms in Latin, explaining what is anomalous in them. (2) Give a similar account of the development of its meanings. (3) Compare the history of the passive in Greek. (4) Derive the following verbs so as to show the original force of the 'passive' suffix:—*uoluitur* (amnis)—*mereor*—*fruor*—*furor*—*osculamur*.

VIII. (1) Compare the scope and use of the Latin infinitive with that of the Greek, pointing out in particular the usages peculiar to either language. (2) What was the original meaning of the infinitive? Which of the two languages has preserved most traces of it? (3) Comment on its use in the following passages (which are to be translated into Greek so far as the infinitive and its construction are concerned).

(*a*) numquid modi futurumst illum quaerere? PLAUT. *Men.* 233.
(*b*) non esse cupidum pecunia est: non esse emacem uectigal est. CIC. *Par.* 6, 3.
(*c*) huncine hominem delectatum esse nugis? CIC. *Div.* 2, 13.
(*d*) scire tuum nihil est nisi te scire hoc sciat alter. PERS. 1, 27.
(*e*) inter optime ualere et grauissime aegrotare nihil prorsus dicunt interesse.
CIC. *Fin.* 2, 13.

IX. Write grammatical notes on the following passages with special reference to the construction of the words in italics:

(*a*) Sabini spem in discordia Romana ponunt: *eam impedimentum* dilectui fore.
LIVY 3, 38, 3.
(*b*) occisis *ad* hominum milibus quattuor reliqui in oppidum reiecti sunt.
LIVY 4, 59, 8.
(*c*) *inimica* inter se esse liberam ciuitatem et regem. LIVY 44, 24, 2.
(*d*) mihi istaec uidetur praeda *praedatum irier*. PLAUT. *Rud.* 1242.
(*e*) acceptum refero uersibus esse *nocens*. OV. *Tr.* 2, 10.
(*f*) ciuica *iura* respondere paras. HOR. *Ep.* 1, 3, 23.
(*g*) nunc manet insontem grauis exitus aut ego *ueri* uana feror.
VERG. *Aen.* 10, 630.
(*h*) hinc tu nisi *malum* frunisci nil potes. PLAUT. *Rud.* 1012.
(*i*) ludere hanc sinit, ut libet, nec *pili* facit *uni*. CATULL. 17, 17.
(*j*) Vmbria te notis antiqua Penatibus *edit*. PROP. 5, 1, 121.
(*k*) terra tremit, *fugere* ferae. VERG. *G.* 1, 330.
(*l*) ubi *crudescere* seditio et a conuiciis et probris ad tela et manus *transibant*, inici catenas Flauiano iubet. TAC. *H.* 3, 10.
(*m*) uidemini tanta mala quasi fulmen optare se *quisque* ne attingat sed prohibere ne conari quidem. SALLUST, *Or. Phil.* § 12.
(*n*) horum adeo Sullam non paenitet ut et facta in gloria *numeret* et, si liceat, auidius *fecerit*. SALLUST, *Or. Lep.* § 19.
(*o*) quod tribuni militum in plebe Romana regnum *exercerent?* quidnam illi consules dictatoresue *facturi essent* qui proconsularem imaginem tam saeuam ac trucem *fecerint?* LIVY 5, 2, 9.

Give the *oratio recta* of this in *English*.

MONDAY, *June* 2, 1884. 1½—4½.

[*Full credit may be obtained by sufficient answers to* seven *questions, of which* three *at least should be taken from* A, two *at least from* B *and* one *at least from* C; *but you are at liberty to attempt a greater number.*]

A.

1. (1) EXPLAIN very carefully what is meant by the 'derivation' of a word. (2) State the conditions to which a satisfactory derivation must conform; and exemplify them by criticising some etymology in which they are conspicuously absent. (3) What causes have retarded or seem likely to retard the advance of Comparative Philology?

2. (1) Enumerate the languages, extant and extinct, which are included in the Indo-European family; and arrange them according to the groups into which they most naturally form. (2) What theories have been proposed to account for the greater similarity which exists between some languages or groups of languages in the Indo-European family than between others in the same family? Briefly criticise them. (3) Mention any characteristics which distinguish the modern forms of Indo-European languages from the more ancient.

3. (1) What are meant by '*aspirates*'? (2) How many 'aspirates' were there in the original Indo-European language and what were they? Briefly summarise the evidence in favour of your view. (3) Give, with examples, an account of the representatives (regular and irregular) of the aspirates in Latin and Greek.

4. Give the cognates of the following words: *στορέννυμι, mors, rumpo, ὄνομα, stream, μέλας*: in (1) Sanskrit, (2) Greek and Latin, (3) any other Indo-European languages; and point out and explain anything peculiar in the correspondence whether of the sound or the sense.

5. Give an account of the inflexions used to indicate distinctions of person in the active verb (with the exception of the imperative) in Greek, Latin and Sanskrit.

B.

1. (*a*) Give a short etymological account of the Conjunctive and Optative forms in Sanskrit and Greek.

(*b*) What do you conceive to have been the original usage of the Conjunctive and Optative respectively? Shew in a tabular form, with illustrative examples, how the most important of the later usages were developed from the primary.

2. Discuss the etymology and usage of the following in connexion with the history of the Conjunctive: *εὔτε, ἵνα, ὡς, εἰ, κεν, ἄν.*

3. (*a*) *πᾶσα ἀντωνυμία ἢ δεικτική ἐστιν ἢ ἀναφορική.* APOLL. DYSC. *περὶ ἀντωνυμίας* p. 10 B. Criticise this statement.

(*b*) Trace, and exemplify from any Indo-European language, the stages by which hypotaxis was developed from parataxis.

4. Comment upon the mood constructions in the following passages so far as they throw light upon the development of the Conjunctive and Optative:

(*a*) yushmākam evāi 'ko 'sānī 'ti. *Çat. Br.* 11, 5, 1, 12.

(*b*) *μή σε, γέρον, κοίλῃσιν ἐγὼ παρὰ νηυσὶ κιχείω.* HOM. *Il.* I. 26.

(*c*) *ἐξελθών τις ἴδοι μὴ δὴ σχεδὸν ὦσι κιόντες.* HOM. *Od.* XXIV. 491.

(*d*) *τόν γ' εἴ πως σὺ δύναιο λοχησάμενος λελαβέσθαι*
ὅς κέν τοι εἴπῃσιν ὁδὸν καὶ μέτρα κελεύθου. HOM. *Od.* IV. 388.

(*e*) yó naḥ pṛitanyād ápa táṃ-tam íd dhataṃ. *RV.* 1, 132, 6.

(*f*) *ὅσσῃ δ' αἰγανέης ῥιπὴ ταναοῖο τέτυκται*
ἣν ῥά τ' ἀνὴρ ἀφέῃ. HOM. *Il.* XVI. 590.

(*g*) *τόφρα δ' ἐπὶ Τρώεσσι τίθει κράτος, ὄφρ' ἂν Ἀχαιοί*
υἱὸν ἐμὸν τίσωσιν, ὀφέλλωσίν τέ ἑ τιμῇ. HOM. *Il.* I. 510.

(*h*) *εὔχεο πᾶσι θεοῖσι τελήεσσας ἑκατόμβας*
ῥέξειν εἴ κέ ποθι Ζεὺς ἄντιτα ἔργα τελέσσῃ. HOM. *Od.* XVII. 50.

(*i*) *οὐδὲ πόλινδε*
ἔρχομαι, εἰ μή πού τι περίφρων Πηνελόπεια
ἐλθέμεν ὀτρύνῃσιν. HOM. *Od.* XIV. 372.

(*j*) kéna mahā mánasā rīramāma. *RV.* 1, 165, 2.

(*k*) *ἡμεῖς δ' ἐνθάδε οἱ φραζώμεθα λυγρὸν ὄλεθρον*
Τηλεμάχῳ μηδ' ἧμας ὑπεκφύγοι. HOM. *Od.* XVI. 371.

(*l*) *ὃν δὲ λάβοιμι*
ῥίπτασκον τεταγὼν ἀπὸ βηλοῦ. HOM. *Il.* XV. 23.

C.

1. (*a*) By what criteria would you divide the varieties of the Greek alphabet into larger and smaller groups? Make a classification in accordance with your answer.

(*b*) Supposing the alphabet alone to be your guide how would you distinguish between archaic inscriptions (1) of Chalcis and Attica, (2) of Boeotia and Chalcis, (3) of Thera and Crete, (4) of Corinth and Argos?

2. Write an account of the symbols used at various times to denote the different E- and O- sounds in Greek. Shew at length how you would apply your remarks to determining the ancient Greek pronunciation of these sounds.

3. (*a*) Describe, with such detail as you may think fit, the principal sources of information for a knowledge of the Italian alphabets.

(*b*) Give the history of the following characters in Latin: C, F, Q, X, Z.

TUESDAY, *June* 3, 1884. 9—12.

1. TRANSLATE, with marginal etymological notes where necessary:

(*a*) utsṛijya sarvagātrebhyo bhūshaṇāni mahāyaçāḥ,
ekavāsā hyasaṃvītaḥ suhṛicchokavivardhanaḥ,
niçcakrāma tato rājā tyaktvā suvipulāṃ çriyaṃ.
Damayantyekavastrā 'tha gacchantaṃ pṛishṭhato 'nvagāt.
sa tayā vāhyataḥ sārddhaṃ trirātraṃ Naishadho 'vasat;
Pushkaras tu mahārāja ghoshayāmāsa vai pure,
'Nale yaḥ samyag ātishṭhet sa gacchet vadhyatāṃ mama.'
Pushkarasya tu vākyena tasya vidveshaṇena ca
paurā na tasya satkāraṃ kṛitavanto, Yudhishṭhira.
sa tasya nagarābhyāse satkārārho na satkṛitaḥ
trirātram ushito rājā jalamātreṇa vartayan,
pīḍyamānaḥ kshudhā tatra phalamūlāni karshayan.
prātishṭhata tato rājā Damayantī tam anvagāt.

Nala IX. 5.

(*b*) sa nāgaḥ prāñjalir bhūtvā vepamāno Nalaṃ tadā
uvāca, "māṃ viddhi, rājan, nāgaṃ Karkoṭakaṃ, nṛipa;
mayā pralabdho maharshir Nāradaḥ sa mahātapāḥ.
tena manyuparītena çapto 'smi manujādhipa;
'tishṭha tvaṃ sthāvara iva yāvad eva Nalaḥ kvacit
ito netā; hi tatra tvaṃ çāpād mokshyasi matkṛitāt.'
tasya çāpād na çakto 'smi padād vicalituṃ padaṃ;
upadekshyāmi te çreyas; trātum arhati māṃ bhavān;
sakhā ca te bhavishyāmi, matsamo nāsti pannagaḥ;
laghuçca te bhavishyāmi, çīghram ādāya gaccha māṃ."
evam uktvā sa nāgendram babhūvāṅgushṭhamātrakaḥ;
taṃ gṛihītvā Nalaḥ prāyād deçaṃ dāvavivarjitaṃ.

Nala XIV. 4.

Parse *ātishṭhet, anvagāt, pralabdho, gṛihītvā.*

Comment on the syntactical usage of *ātishṭhēt, gacchet, mokshyasi, trātum arhati.*

2. Translate with short comments upon the Vedic forms and constructions where they differ from those of later Sanskrit:

(*a*) Anaçvó jātó anabhīçúr ukthyò ráthas tricakráḥ pári vartate rájah. |
mahát tád vo devyàsya pravā́canaṃ dyā́ṃ ṛibhavaḥ pṛithivī́ṃ yác ca pū́shyatha. ||
ráthaṃ yé cakrúḥ suvṛ́itaṃ sucétasó 'vihvarantaṃ mánasas pári dhyáyā, |
tā́ṅ ū nv àsya sávanasya pītáya ā́ vo vājā ṛibhavo vedayāmasi. ||
tád vo vājā ṛibhavaḥ supravācanā́ṃ devéshu vibhvo abhavan mahitvanám, |
jívrī yát sántā pitárā sanājúrā púnar yúvānā caráthāya tákshatha. ||
ékaṃ ví cakra camasā́ṃ cáturvayaṃ níç cármaṇo gā́ṃ ariṇīta dhītíbhiḥ. |
áthā devéshv amṛitatvám ānaça çrushṭí: vājā ṛibhavas tád va ukthyàm. ||

Rigveda IV. 36, 1—4.

(*b*) Çukrám te anyád yajatám te anyád; víshurūpe áhanī; dyaúr ivāsi. |
víçvā hí māyā́ ávasi svadhāvo; bhadrā́ te pūshann ihá rātír astu. ||
ajā́çvaḥ paçupā́ vā́japastyo dhiyaṃjinvó, bhúvane víçve árpitaḥ, |
áshṭrāṃ pūshā́ çithirā́m udvárīvṛijat, saṃcákshāṇo bhúvanā devá īyate. ||
yā́s te pūshan nā́vo antáḥ samudré hiraṇyáyīr antárikshe cáranti, |
tā́bhir yāsi dūtyā́m súryasya kā́mena kṛita çráva ichámānaḥ. ||
pūshā́ subándhur divá ā́ pṛithivyā́, iḷás pátir maghávā dasmávarcāḥ, |
yáṃ devā́so ádaduḥ sūryā́yai kā́mena kṛitā́m tavásaṃ svā́ñcam. ||

Rigveda VI. 58.

Comment on the form or construction of the spaced words.

3. Apply the rules of Sandhi to: *çiva iha—tān çivān—giri etau—taiḥ Rudraiḥ—punaḥ iti.*

Separate into their elements the following Sandhi combinations: *tacca—dhāvannaçvaḥ—mahāñcchūraḥ.*

4. Analyse (parsing where necessary) the following compounds which occur in the *Nala*, and state, giving your reasons, the class to which each belongs: *suhṛittyāgam—mṛigajīvana—mṛidupūrvayā—jhillikāgaṇānādita—saṃgrāmajit—yatrasāyam.*

5. Give the nominative and genitive singular, the nominative dual and the accusative plural of: *devī—dātṛi—kṛitavat—takshan—idam.*

6. Comment on the case constructions in the following:

(*a*) hiraṇasya suvarṇasya yānayugyasya vāsasāṃ
āvishṭaḥ Kalinā dyūte jīyate sma Nalas tadā.

(*b*) çaranaṃ tvāṃ prapannā 'smi.

(*c*) jagmur vihāyasā.

(*d*) janitryāḥ kathayāmāsa.

(*e*) tan nashṭam ubhayaṃ kasmād dharmajñasya satas tava?

7. Explain the mood and tense usages in:

yadi cāyam abhiprāyas tava jñātīn brajed iti—mā çucaḥ—māsma çoke manaḥ kṛithāḥ.

8. Parse and translate: *açret—rodasī—cakrúḥ—ároravīd—anavantehéha—vṛiṇīmahe.*

9. Decline the imperative of √*as* (to be) and the present indicative middle of √*hu* throughout, marking the accents.

10. Give the paradigm in active of √*kṛi* and in middle of √*budh.*

11. Give the infinitive of √*bhū*, √*sṛij* 'create', √*chid* 'cut', √*vṛi* 'cover'.

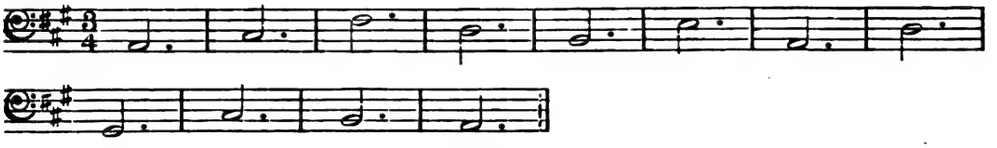
12. What is meant by Verner's law? Give other examples of the importance of the Vedic accent to the general study of Indo-European philology.

13. Explain the sound changes which the following words and roots have undergone, illustrating from other languages: *kshaṇ, pṛithu-, dīrgha-, nakha-, dehi* (*daddhi* Ved.), *shṭhiv.*

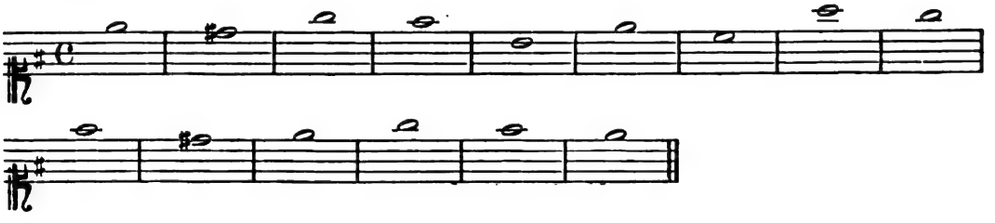
EXAMINATION FOR THE DEGREE OF DOCTOR OF MUSIC.

THURSDAY, *March* 13, 1884. 2 to 5 P. M.

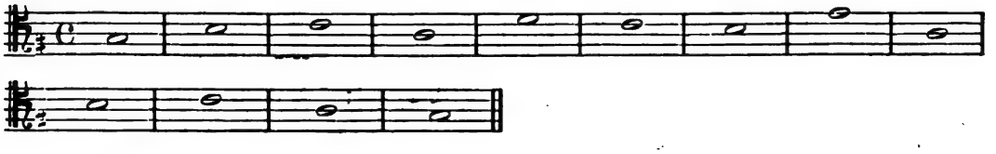
1. WRITE Counterpoint for two Sopranos, two Altos and two Tenors, all of the Fifth Species, above the following Subject, the score to consist of seven parts. Figure the Bass.



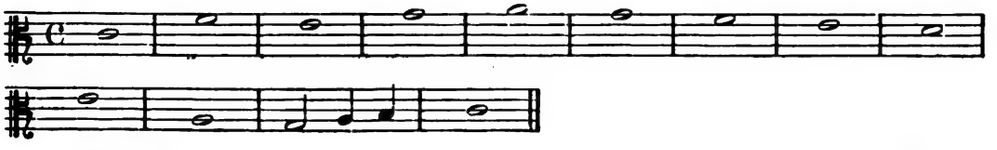
2. Write Counterpoint for second Soprano, Alto, Tenor, and Bass, below the following Subject. One part to be in the First Species, one in the Second, one in the Third, and one in the Fifth. The score to consist of five parts. Figure the Bass.



3. Add to the following Canto Fermo a Counterpoint of the Fifth species which will be invertible in the tenth. The last bar to be free. Write the Counterpoint above and below the Canto Fermo, and figure the Bass in each instance.



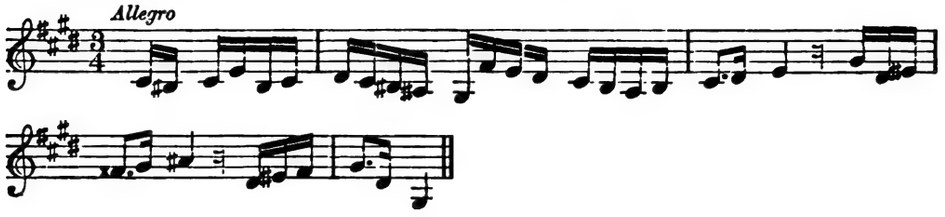
4. Treat the following similarly for inversion in the twelfth.



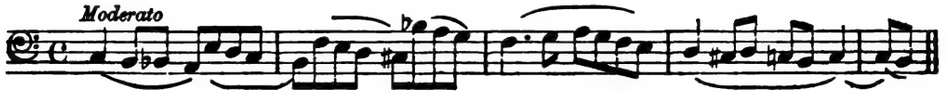
5. Write a four part fugue on the following subject, adding a contrasting counter subject, introducing at least two episodes, and a stretto on a Dominant pedal, for which an extra part may be introduced.

6. Write the answers to the following subjects:

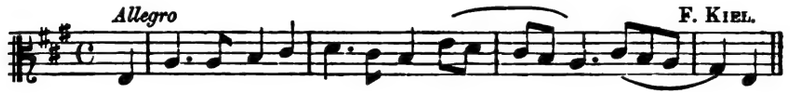
1. *Allegro*



2. *Moderato*

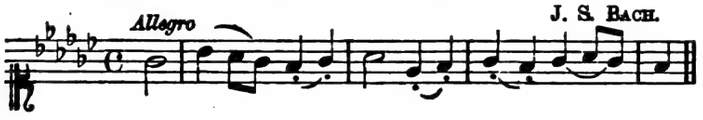


3. *Allegro* F. Kiel.



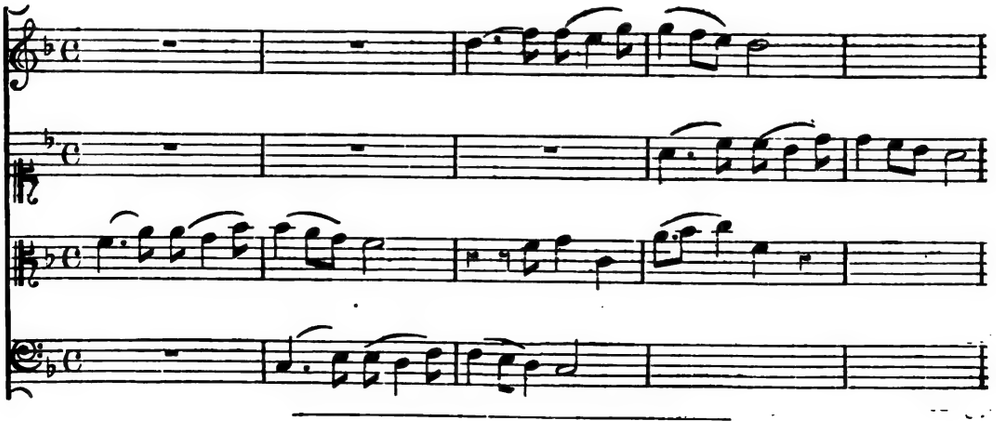
7. Write the subjects to the following answers:

Allegro J. S. Bach.



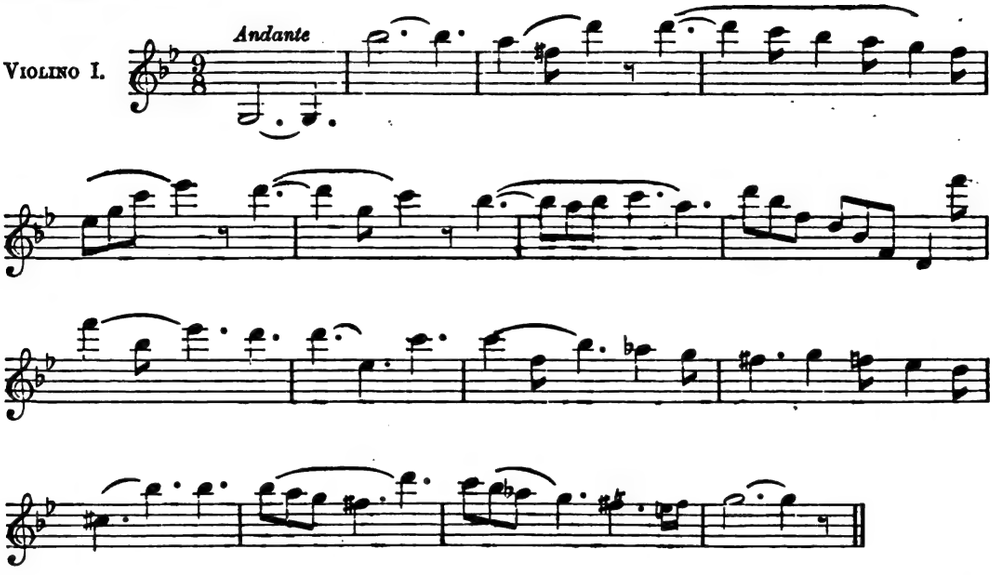
Adagio

8. Continue this Canon for 12 to 16 bars, and make a free Coda with imitations.

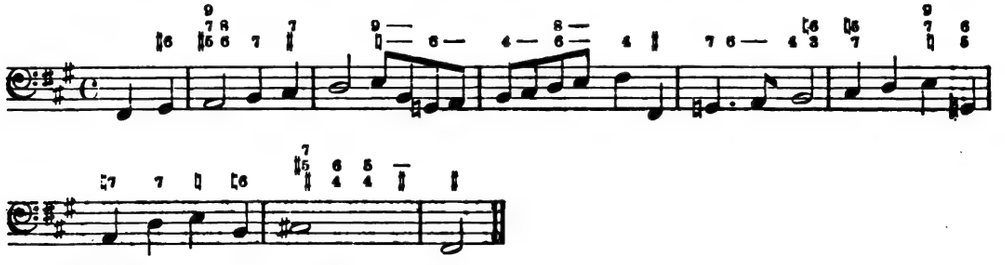


FRIDAY, *March* 14, 1884. 9 to 12 A.M.

1. WRITE parts for second violin, two violas and two violoncellos to accompany the following, the score to consist of six parts. Occasional rests may be used in any of the parts. Mark the bowing, and insert other marks of expression. Figure the Bass.



2. Write parts for two Sopranos, Alto and Tenor, according to the figuring, above the following Bass. State at what bars and into what keys the music modulates. Insert occasional passing notes in any of the parts.

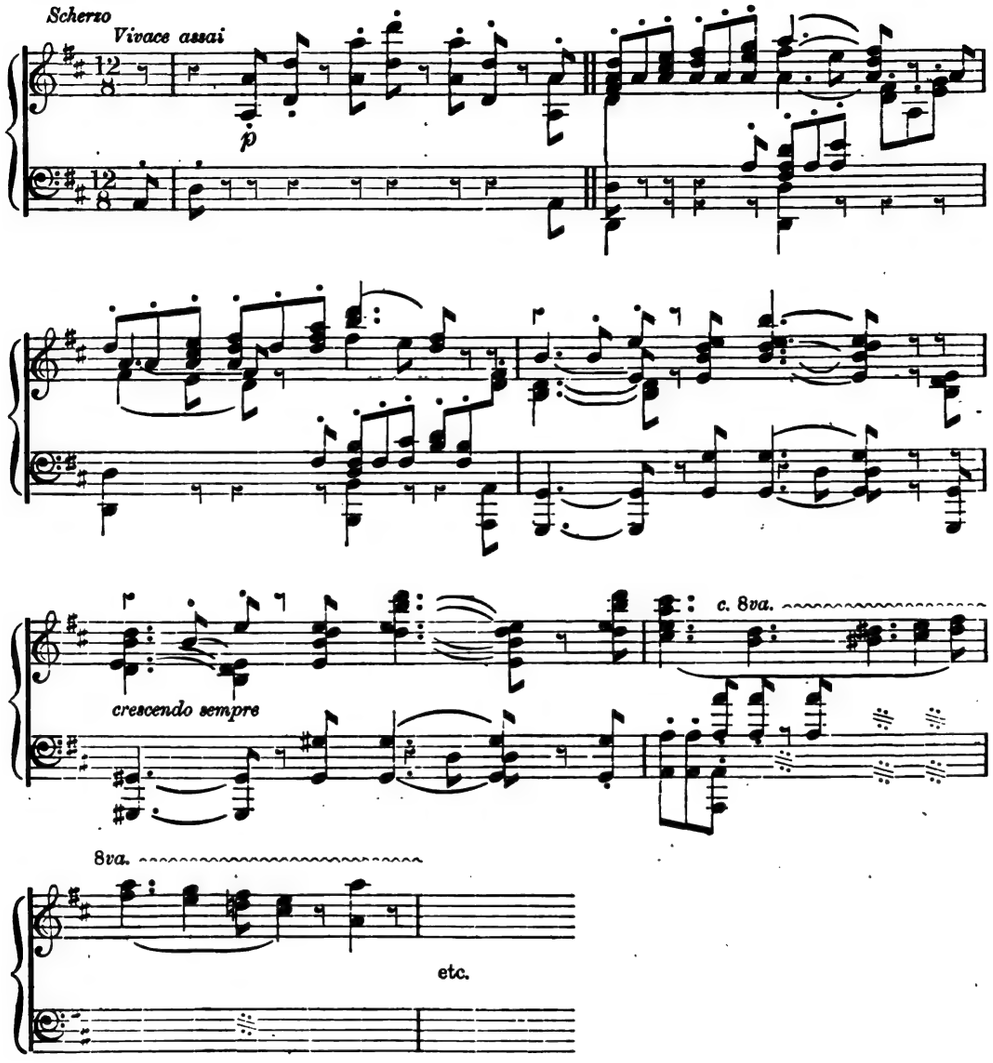


All discords except passing notes must be prepared.

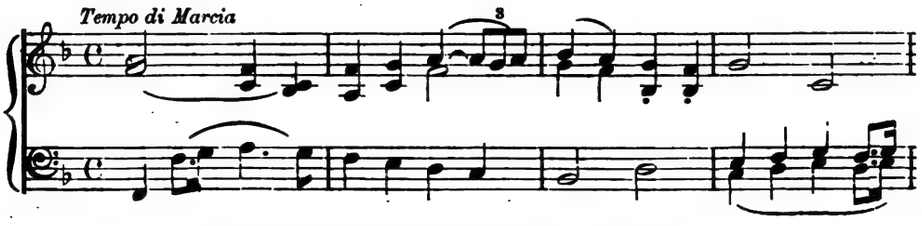
3. Give an outline of the history of harpsichord music; describing the manner in which the peculiarities of the instrument affected the development of instrumental music, and giving some particulars concerning the best masters who were connected with it, either as players or composers.

4. Describe the condition of the Opera in Germany previous to Mozart's time, and give some account of the characteristics of his works for the stage.

5. Score this for the ordinary modern band: Strings, 2 Flutes, 2 Hautboys, 2 Clarionets, 2 Bassoons, 2 Horns, 2 Trumpets, and Drums.



6. Complete this March for Pianoforte; modulate through A minor to C major, finishing the First Part with a Codetta of two or four bars in that key. End the Second Part parallel to this; the whole consisting of 32 to 40 bars.



PRELIMINARY EXAMINATION FOR THE DEGREE OF BACHELOR OF MUSIC AND SPECIAL EXAMINATION IN MUSIC FOR THE B.A. DEGREE.

THURSDAY, *May* 29, 1884. 10 A.M. to 1 P.M.

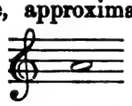
1. DESCRIBE the nature of a sound-wave in air. What are the 'amplitude,' the 'phase,' the 'wave-length'? How does an individual particle of the air move?

2. Has a sound of given loudness, pitch and quality a definite wave-form?

Draw a wave figure for a fundamental note and its second overtone, supposed to be of equal loudness but in different phases.

3. What are vibration-fractions? Why is the fraction corresponding to the sum of two intervals obtained by multiplying together the fractions corresponding to the intervals?

4. Which is the greater, three major thirds or an octave, and by how much?

5. State, approximately, the number of vibrations per second which give rise to the note  ; and deduce those of the other notes of the diatonic scale of which this note is the Fourth.

6. What is meant by the 'partials' or 'overtones' of a note? Would you prefer to call the octave of a note its second partial tone or its first upper partial tone, and for what reason?

7. Which of the notes of the diatonic scale of C are found among the overtones of C?

8. What are the nature and cause of the phenomenon of Resonance?

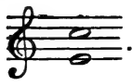
The dampers of middle C on a pianoforte are raised; and the E♭ next below is struck sharply. What note or notes will be heard by resonance?

9. What is the physical difference between a note sounded on a tuning-fork and a pianoforte respectively? Why are the hammers of a piano covered with felt; and what has determined the place on the wire at which the hammers are made to strike it?

10. Two precisely similar tuning-forks are thrown very slightly out of unison. Describe and explain the phenomenon heard; and state how it changes as the difference between the forks is gradually increased.

11. What is meant by 'combination-tones,' or 'resultant-tones,' and their 'orders'?

Determine their positions in the case of the following two simple primaries

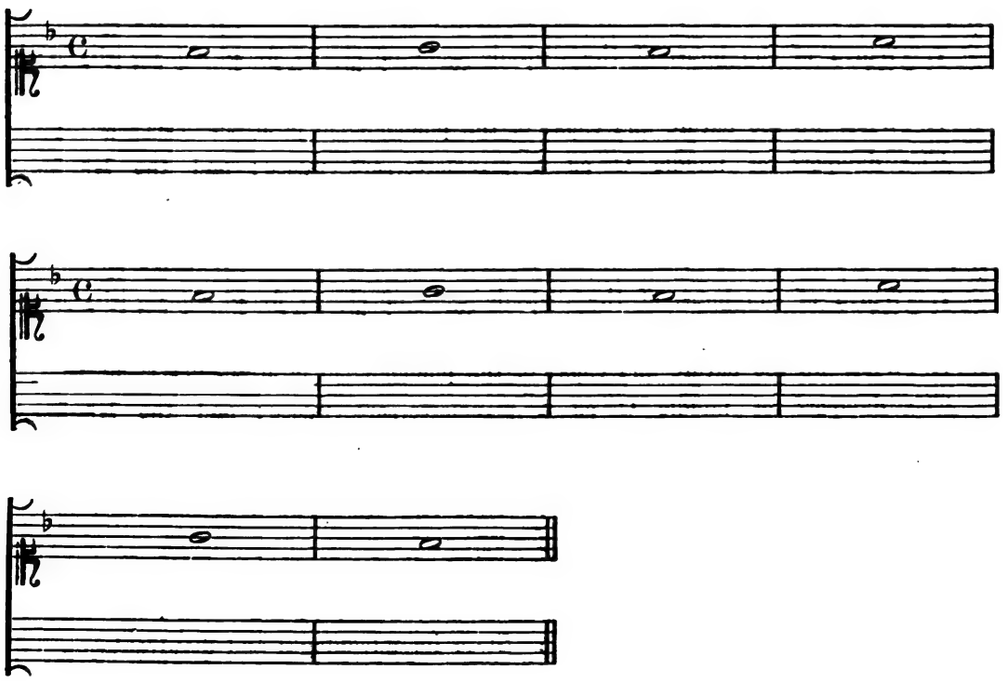
 .

12. What is 'equal temperament'? State its advantages and disadvantages.

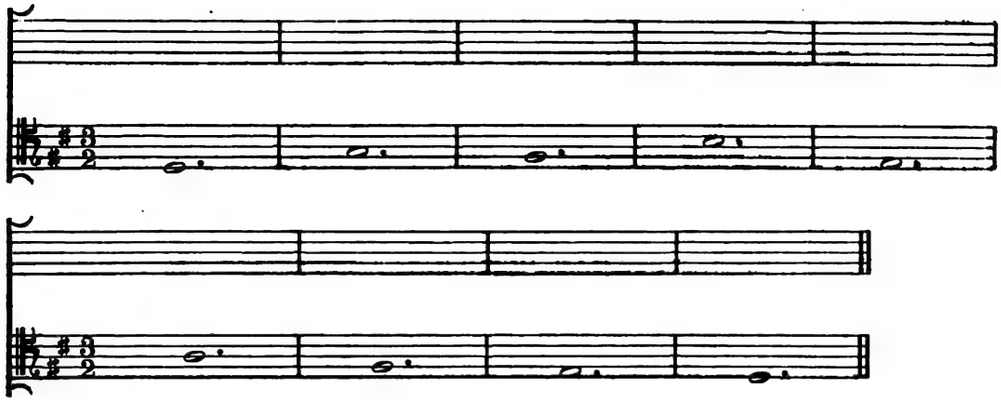
THURSDAY, *May* 29, 1884. 2 to 5 P. M.

COUNTERPOINT.

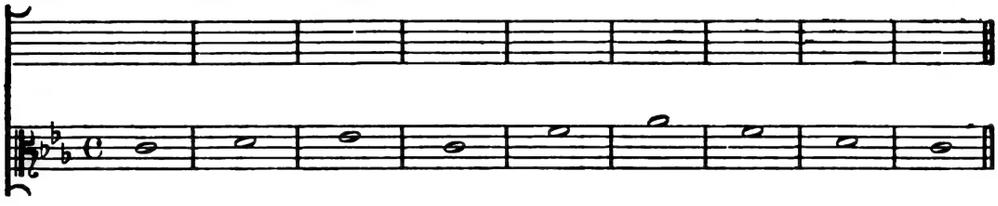
I. WRITE a Counterpoint in the Fifth Species, for Tenor, below the following Canto Fermo. Figure the Bass.



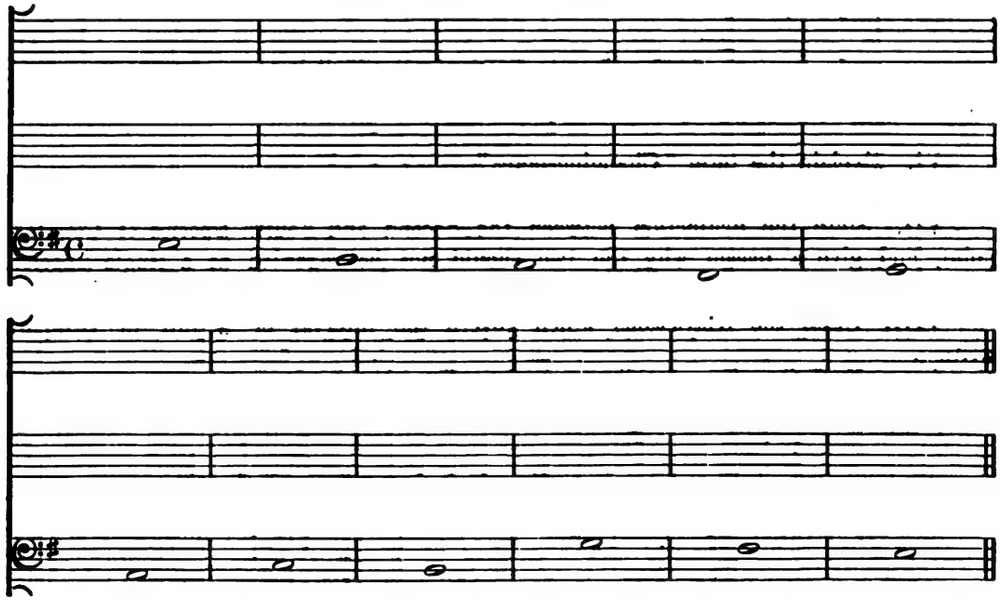
II. Write a Counterpoint, three notes against one, for Alto, above the following Canto Fermo. Figure the Bass.



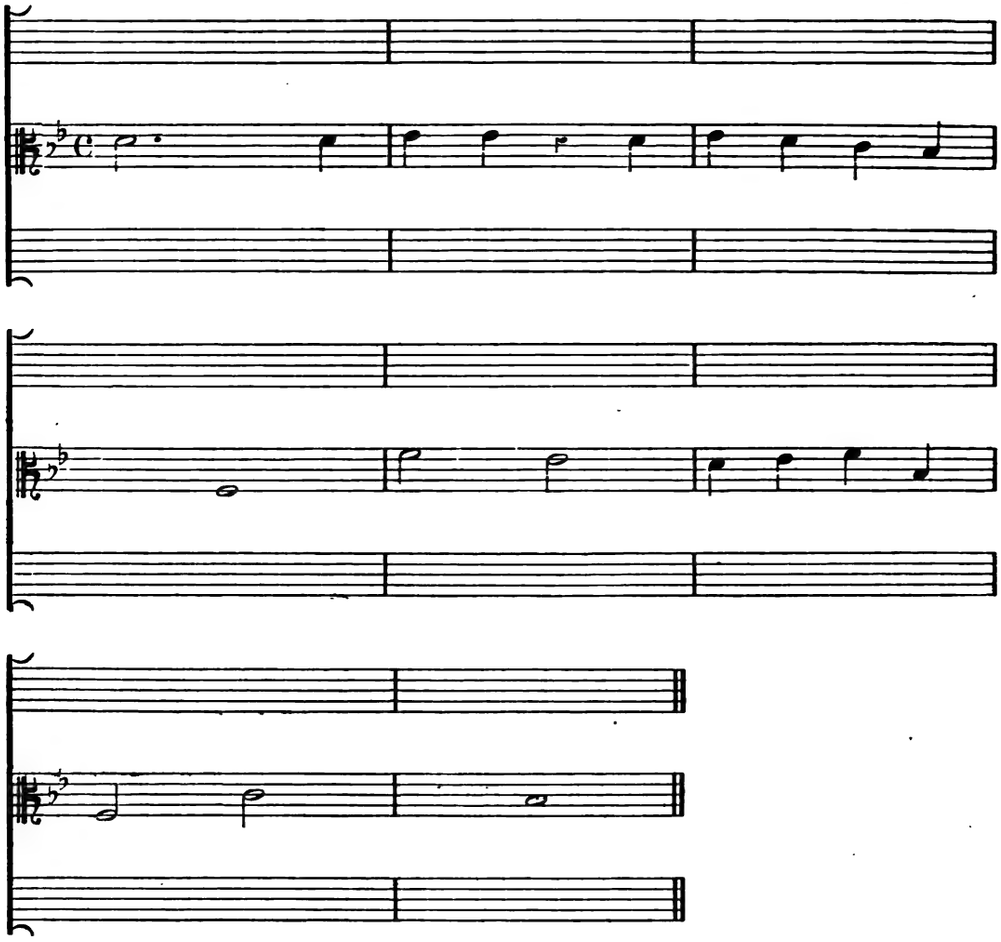
III. Write a Counterpoint in the Fourth Species for Soprano above the following Canto Fermo. Figure the Bass.



IV. Write a Counterpoint in the Second Species for Soprano, and one in the Third Species, four notes against one for Tenor above the following Canto Fermo, the score to consist of three parts. Figure the Bass.



V. Write Double Counterpoint in the 15th against the following fragment, the Counterpoint to consist entirely of quavers. Write the Counterpoint both above and below the subject and figure the Bass in each instance.



VI. Explain the term "Changing-notes."

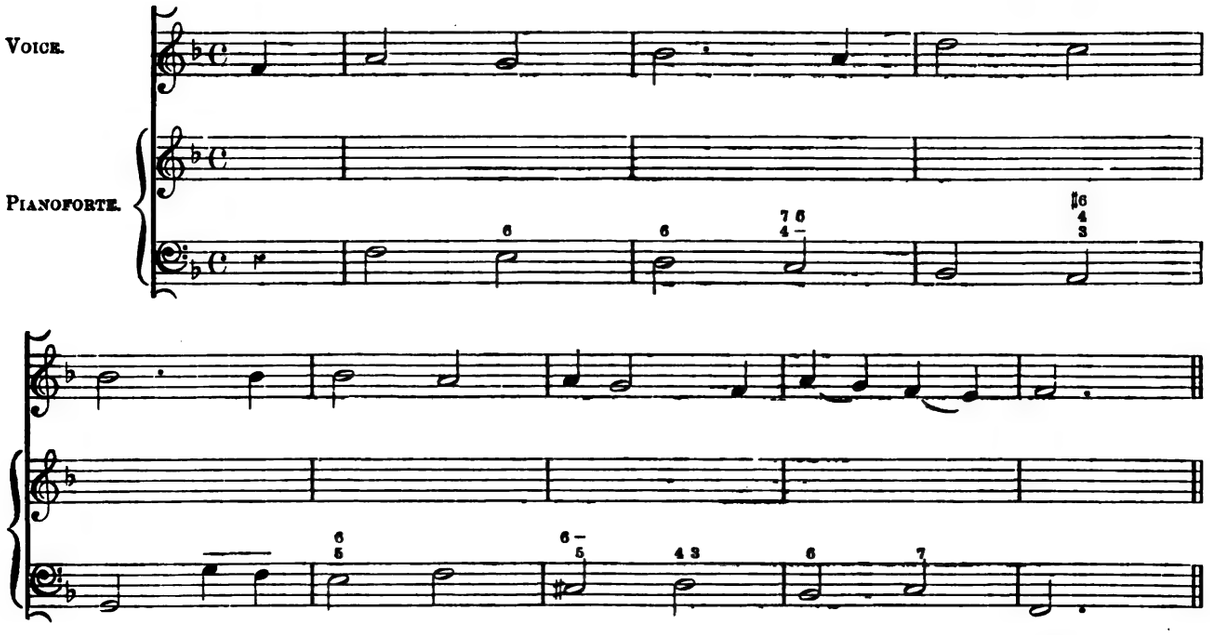
VII. State the distinction between the Second and Fourth Species of Counterpoint, and give a reason why the two should not be regarded as a single Species.

VIII. State the restrictions which govern the interval of a 3rd in two-part writing.

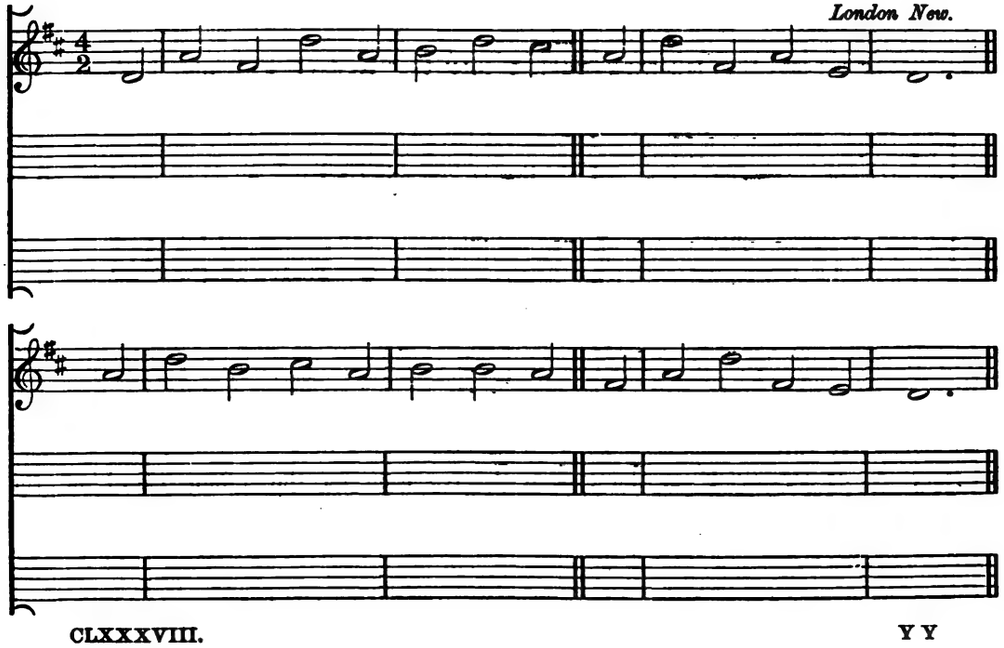
FRIDAY, *May* 30, 1884. 9 A.M. to 12 M.

HARMONY.

I. ADD the right-hand part to the following accompaniment, using Arpeggios, and occasional Passing-notes.



II. Add a Bass and an inner part to the following Psalm-tune. State the *Metre*. Figure the Bass.

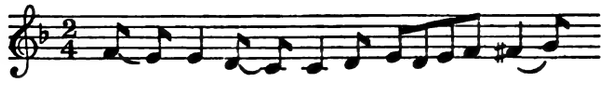


III. Write the Bar lines to the following Phrases. Add the Time-Signatures where not given. State the work from which each extract is taken.

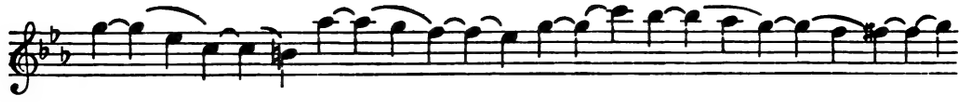
A.

B.

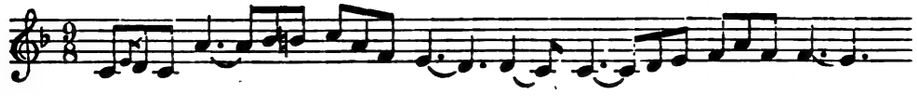
C.



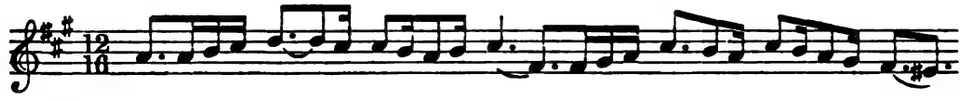
D.



E.

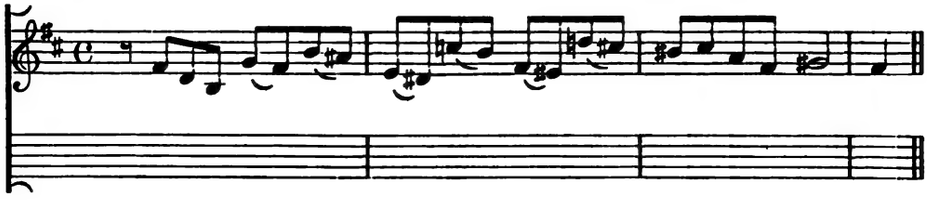


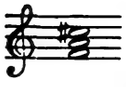
F.



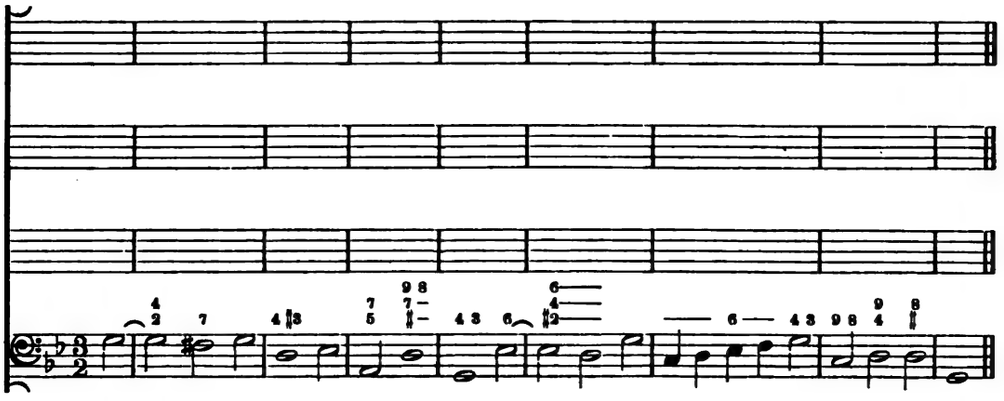
G.

IV. Transpose the following Subject into the Key of F minor, prefixing the Signature. State the work from which it is taken.

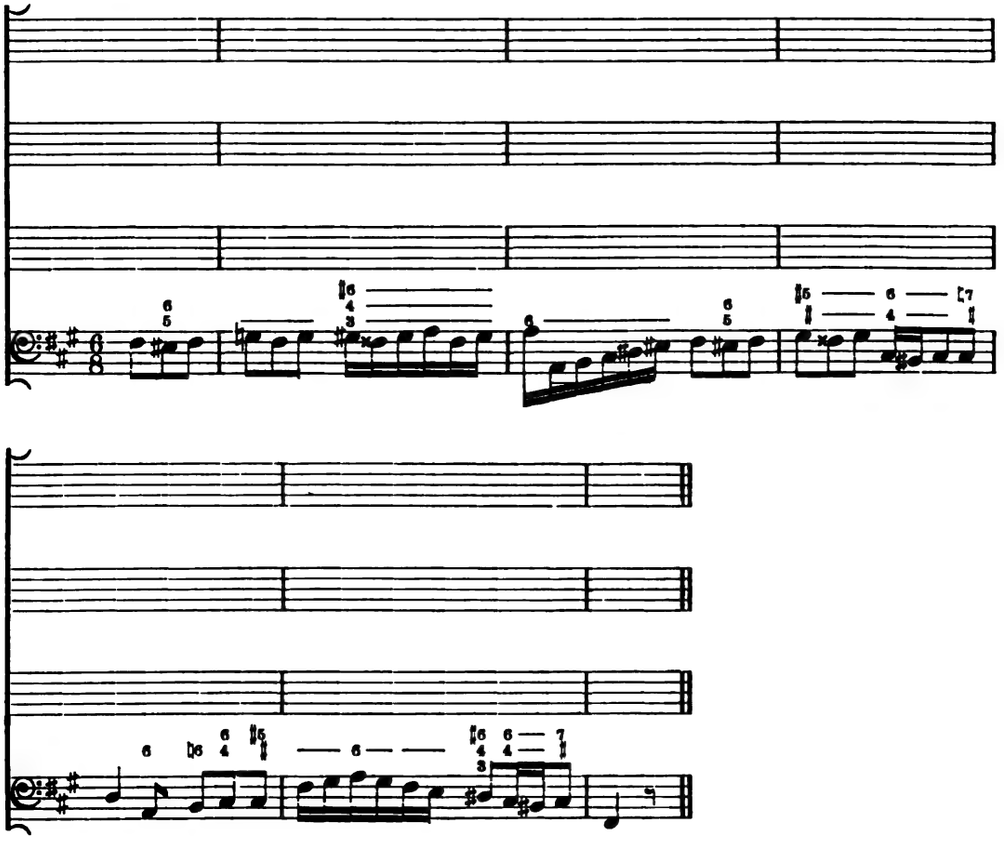


V. Write the three enharmonic varieties of this chord  according to whether A, or ♯C, or F is the root. Resolve each on the minor chord of the tonic or its first inversion in the key of which the root is the dominant, the example to be for pianoforte, but in four parts.

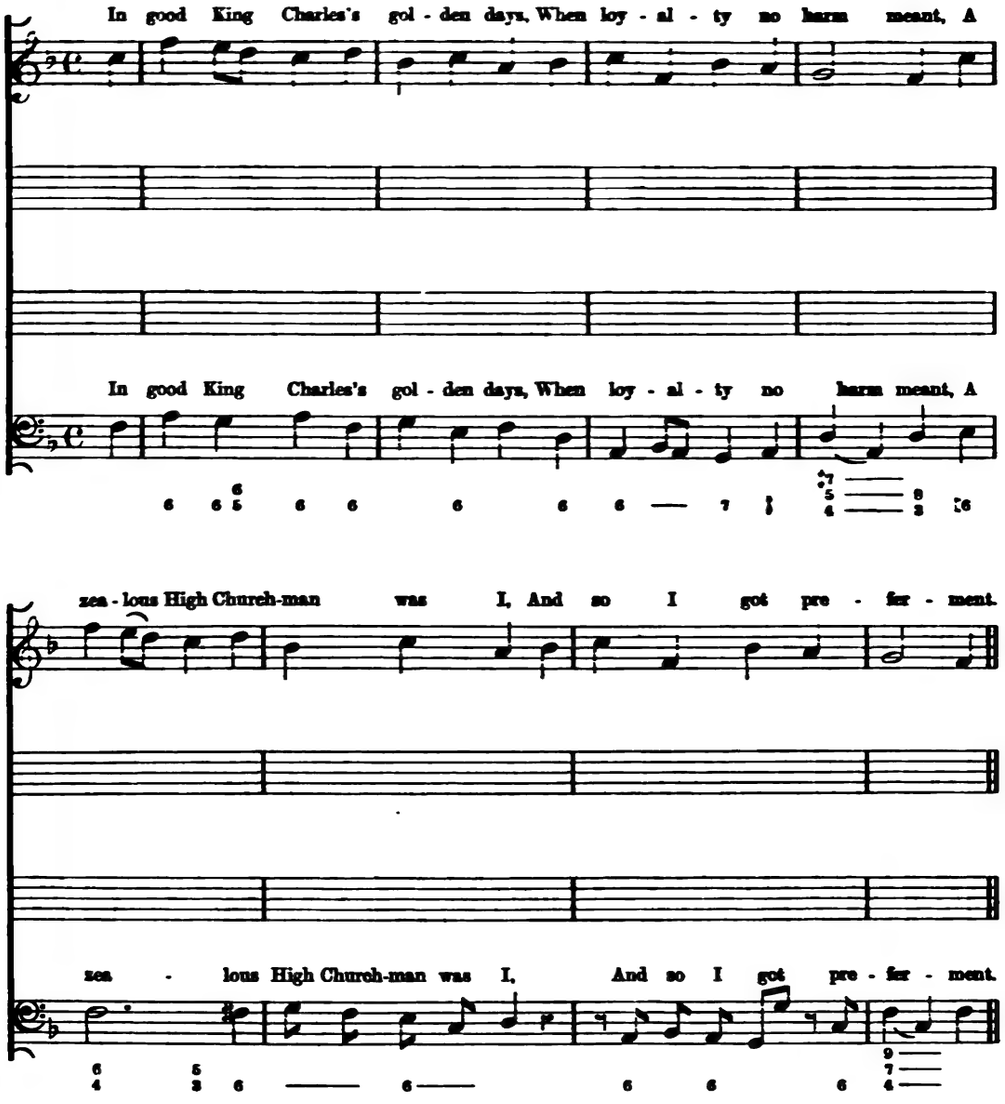
VI. Add parts for Soprano, Alto and Tenor to the following Bass, using occasional Passing-notes. Every discord except Passing-notes must be prepared.



VII. Add parts for Soprano, Alto and Tenor to the following Bass, using occasional Passing-notes.



VIII. Add parts for 2nd Treble and Tenor between the following two, using rests at discretion, and writing the words in each part.



Describe the first chord in bars 4 and 8.

The viva-voce examination will be at 2 P.M. this day.

SPECIAL EXAMINATION IN LAW FOR THE ORDINARY B.A. DEGREE.

FRIDAY, *May* 30, 1884. 9—12.

BLACKSTONE. I.

1. WHAT are the principal statutes by which the fundamental rights and liberties of Englishmen have been established? Under what heads does Blackstone sum up these rights?

2. What is a 'parson'; a 'lay rector'; a 'vicar'?

Explain historically the origin of vicarages, and the connection of the tithes with the advowson. To what purposes were the tithes originally applied?

3. How far is a master responsible for the acts of his servants? In what case has a stranger any interest in the performance of a contract of service? Illustrate by reference to 38 and 39 Vict. c. 86. (about the gas stokers.)

4. Which are the 'three estates of the realm'?

Explain Blackstone's statement that 'herein consists the true excellence of the English government, that all the parts of it form a mutual check upon each other.'

5. What is 'tenure in free socage', and 'tenure in gavelkind'? Give the peculiarities of the latter tenure.

6. With what objects were the following statutes passed, and what did they enact?

   i. De donis conditionalibus. 13 Edw. I.

   ii. Quia emptores. 18 Edw. I.

7. Explain historically the origin of 'Uses.'

8. What are the differences between Joint-tenancy, Coparcenary and Tenancy in common?

9. *A* dies intestate leaving a mother, a sister, a half-brother on the father's side, a grandson (by a deceased son) and two daughters; in what order would they be entitled to succeed to his real property?

10. What is a 'Bill of Lading' and a 'Bill of Exchange'? What is meant by 'Stoppage *in transitu*'?

11. Define 'Bailment' and 'Lien' and illustrate by examples.

12. Explain the following terms *'primer seisin'; 'escuage'; 'borough-english'; 'estate by elegit'; 'chattel real'; 'bottomry'; 'executor de son tort'; 'tenant by the curtesy.'*

FRIDAY, May 30, 1884. 1—4.

BLACKSTONE. II.

1. To what limitations and restrictions is the right of distress subject?

2. Give an account of the jurisdiction of the Court of Queen's Bench.

3. Explain wherein the offences of slander and libel consist. Are they always punishable?

4. State the forms of agreement which, by the Statute of Frauds, must be reduced to writing. With regard to these Blackstone remarks "In all these cases a mere verbal assumpsit is void." Explain this term.

5. Give a short sketch of the jurisdiction of English Courts of Equity.

6. Distinguish between a felony and a misdemeanour.

7. Define the crime of Burglary and point out the chief things to be considered in the definition.

8. What criminal cases come before the court of the Lord High Steward? By what court is it replaced during the session of Parliament?

9. When and in what way may a man be arrested?

10. What are the chief points to be specified in the indictment of a prisoner?

11. Give the leading points of difference between the rules of evidence in a civil action and in a criminal trial.

12. Explain the meaning of the following phrases: "*chose in action*," "*benefit of clergy*," "*præmunire*," "*courts of oyer and terminer*."

SATURDAY, *May* 31, 1884. 9—12.

MACKENZIE.

1. ENUMERATE the different sources of Roman Law in the republican period and give a short account of each of them.

2. Describe the part played by the Prætor and by the Jurisconsults in the development of the Roman Law; and give a brief account of the legal works issued under the authority of the Emperor Justinian.

3. Explain the position in relation to Public and Private law of the following persons:

(i) *Peregrini*, (ii) *Latini*, (iii) Sons under the *patria potestas*.

4. What was the effect of marriage on the personal status of the wife and on her property at different periods of Roman history?

Give the different modes by which the *manus* was acquired by the husband.

What is the rule of English law as to the validity of marriages contracted by British subjects out of England?

5. Distinguish between *Adrogatio* and *Adoptio* and give the legal effects of each before and after the reign of Justinian.

6. Titius who is owner (*dominus*) of a slave sells him to Mævius in the reign of Augustus, but goes through no legal formalities: merely handing over the slave and taking the money.

Explain fully the legal position of Mævius. Would it be different in the reign of Justinian?

7. What is the difference between prædial and personal servitudes? give two instances of each.

8. Distinguish between natural and civil obligations and explain the terms *contractus* and *pactum*.

Into what four classes were contracts divided in Roman Law and what was the characteristic of each class?

9. (*a*) *A* deposits his plate with a friend *B* for safe custody.

(*β*) *C* pawns his plate with *D*.

(*γ*) *E*, at *F*'s request, removes *F*'s furniture from one house to another gratuitously.

(*δ*) *G*, unasked, takes care of some goods belonging to *H*.

(*ε*) *K*, the partner of *L*, in the absence of the latter carries on the business.

(*ζ*) *M* brings goods with him to the inn of *N*.

What is the liability of *B*, *D*, *E*, *G*, *K* and *N* in Roman Law with respect to the goods in their charge?

What would be the liability of *E* and *N* in English law?

10. What were the requisites for a valid sale of goods in Roman Law?

When did the property in the goods sold pass to the purchaser?

At whose risk were the goods immediately after the sale?

Compare the rules of Roman and English law as to implied warranty against defects in quality.

11. Explain the terms *hereditas* and *bonorum possessio*.

For what reasons and by whom were *fideicommissa* made legally enforceable?

12. Explain very briefly the following terms:

Jus honorarium; peculium adventitium; res mancipi; emphyteusis; usufructus; pactum antichresis; querela inofficiosi testamenti; portio legitima; quarta Falcidia; beneficium inventarii.

SPECIAL EXAMINATION IN HISTORY FOR THE ORDINARY B.A. DEGREE.

FRIDAY, *May* 30, 1884. 9—12.

OUTLINES OF ENGLISH HISTORY.

1. IT has been said, "that of the two sides of Feudalism, our Norman kings carefully shut out the side which tended to weaken the royal power, and carefully fostered the side which tended to strengthen it." (Freeman's Reign of William Rufus.)

Comment on the accuracy of this expression.

2. What were the causes and what was the immediate result of the cession of England by John to the Pope?

3. What was Edward III.'s claim to the throne of France?

4. Describe the revolt of the labourers in the reign of Richard II. To what causes was it due?

5. Give a short account of Henry V.—Sir John Oldcastle—Jack Cade—The Earl of Warwick—Margaret of Anjou.

6. Describe the progress of the Reformation during the administrations of Cardinal Wolsey—Sir T. More and—Thomas Cromwell, Earl of Essex.

7. Enumerate the chief events in the war between Charles I. and the Parliament.

8. Describe the events which contributed directly to the downfall of the Stuart dynasty.

9. What were the causes of the war of the Spanish Succession, and what part did England take in it? Discuss the policy which concluded the treaty terminating the war.

10. Give a short summary of the Irish policy of the British Government between A.D. 1782—1800.

11. Enumerate shortly the acquisitions of England in India during the administrations of Clive and Warren Hastings. On what grounds was the latter impeached?

12. Write a short note on not more than *four* of the following subjects:—The Good Parliament—Investiture—The Petition of Right—The Bill of Rights—Catholic Emancipation—The Stamp Act.

FRIDAY, *May* 30, 1884. 1—4.

HALLAM'S CONSTITUTIONAL HISTORY.

1. DISCUSS the wisdom of the manner in which the dissolution of the Monasteries was carried out.

2. Shew by instances that the independent spirit of the House of Commons was reviving during the reign of Elizabeth.

3. Who was legally entitled to the English throne on the death of Elizabeth?

4. When and how did the Crown lose the power of creating Monopolies? State any exceptions to the rule and explain the grounds on which they rest.

5. Give an account of the events which led to the dismissal of Chief Justice Coke.

6. Write a sketch of the public career of Strafford.

7. Give a short account of the nature and design of the Grand Remonstrance.

8. What were the chief provisions of the Corporation Act, what party in the state was affected thereby?

9. Shew the importance of the reign of William III. in our constitutional history.

10. State briefly the distinctive principles of the Whig and Tory parties in the reign of William III., shewing how these were modified by circumstances.

11. Contrast the Scots parliament with the English.

12. Narrate briefly the course of Irish history during the reign of Elizabeth.

SATURDAY, *May* 31, 1884. 9—12.

MOTLEY.

1. DESCRIBE the general condition and prospects of the chief European nations, at the time of the assassination of William the Silent?

2. To what causes do you attribute the capitulation of Antwerp to the Spaniards? Discuss the character of St Aldegonde and his behaviour upon this occasion.

3. What reasons appear to have influenced Elizabeth in declining the proffered sovereignty of the United Provinces?

4. Give a short description of the difficulties with which the Earl of Leicester had to contend during his administration of the Netherlands. Describe the political principles advocated by his supporters.

5. What was the general design of the attempted invasion of England in 1588? What was Parma's opinion of the enterprise? To what causes do you attribute its failure?

6. In what way did the death of Henry III. of France affect the cause of the United Provinces? Describe very shortly the immediate consequences to France of that king's death.

7. Give a short account of the military reforms and successes of Maurice of Nassau.

8. To what causes are the greatness of the Spanish Monarchy in the 16th century to be attributed? How do you account for its rapid decline?

9. Give some account of the establishment of the Dutch East India Company and of its earlier operations.

10. Discuss the policy of the Dutch campaign into Flanders, and describe the battle of Nieuport.

11. Write a short biography of John of Olden-Barvoeld, giving your opinion of his general policy and conduct.

12. Give a short description of the United Netherlands at the close of their struggle with Spain. Enumerate some of the men most eminent in science, art, or literature, which Holland produced at this period.

CHANCELLOR'S MEDAL FOR LEGAL STUDIES.

MONDAY, *May* 26, 1884. 9—12.

CIVIL AND CRIMINAL LIABILITIES OF OFFICERS OF THE STATE.

1. IN what cases, if any, are questions of military or naval duty or discipline cognizable in a civil court?

2. What proceedings can be taken in the following cases, and in what court?

(*a*) The colonel of a regiment started an evening school for the soldiers, and ordered the plaintiff to attend. After trying it for a few days, plaintiff ceased to attend. For this offence the colonel had him arrested and placed in solitary confinement and subsequently held a court-martial which sentenced the plaintiff to further imprisonment.

(*b*) The defendant, being the plaintiff's superior officer, in the course of his military duty forwarded to the Adjutant-General certain letters written by the plaintiff, and at the same time reported to the Commander-in-Chief on the contents of such letters, answering the charges contained in such letters and using words defamatory of the plaintiff. It is alleged that the defendant did this maliciously, and without any reasonable, probable or justifiable cause, and not in the *bonâ fide* discharge of his duty as the plaintiff's superior officer.

(*c*) The defendant in the last case in addition to his formal official report, sent a private letter to the Commander-in-Chief reflecting still more strongly on the plaintiff, and insinuating that he was a bully and a coward.

(*d*) By a general order it was declared that all unemployed Indian officers ineligible for public employment by reason of misconduct, or physical or mental inefficiency, should be removed to the pension list. Under this order the plaintiff was removed to the pension list, and a notification of the plaintiff's removal was published in the *Indian Gazette*, with a reference to the order; whereby the plaintiff suffered special damage.

(*e*) A major maliciously and without any cause whatsoever degrades a sergeant to the ranks, whereby he loses pay.

(*f*) A sentry in time of war is ordered to suffer no one to pass up a certain staircase. A civilian pushes past, and the sentry fires and kills him.

(*g*) A man who had been pressed was tried by a court-martial for attempting to escape, and sentenced to ten lashes. It was proved that on the preceding Saturday night plaintiff had drawn his pay with the other sailors. It is alleged that the court-martial had no jurisdiction, having been improperly formed and summoned on too short a notice.

3. Is the captain of a man-of-war answerable for damage done by her negligently running down another vessel? Would it be any defence for him if he succeeded in proving that the accident happened during the watch of the second lieutenant, who was upon deck, and had the actual direction and management of the steering and navigating of the man-of-war at the time, and that the captain was not then upon deck, nor was called by his duty to be on deck then? Or does the maxim *Respondeat superior* apply?

4. The Attorney General of Hong-Kong was appointed Governor in 1881. At that date he owed the local wine-merchant £40, which amount has now increased to £320. Can the wine-merchant sue the Governor, and, if so, where?

5. The Governor of a colony erroneously but honestly believing that a rebellion is about to break out immediately, and that *A* and *B* are the ringleaders, proclaims martial law and instantly arrests *A* and has him shot without any trial. The next day he seized and detained a schooner in which he erroneously believed *B* was about to escape. The same Governor subsequently libelled an attorney in the way of his profession. Can any and what proceedings be taken against him and where?

6. At the sacking of the Winter Palace an officer snatched up a little silver image studded with precious stones, and has it still. It was the family idol of the then High Chamberlain of the Chinese Court and of priceless value to him. Now the former High Chamberlain has been appointed Chinese Ambassador here. Can he sue here to recover his idol?

7. The officer in command at Aldershot instituted rifle practice on the common close to plaintiff's house to his great annoyance, and thus clearly depreciated the value of plaintiff's house. Will any action lie, and, if so, against whom?

8. The King of Oudh owed *A* money; the East India Company annexed Oudh; the Queen took over the liabilities of the East India Company. Has *A* any remedy, and, if so, against whom?

9. Does any action lie in any of the following cases, and if so, where, and what would be the proper form of proceeding?

(*a*) A judge of the Queen's Bench Division decides maliciously and corruptly against the plaintiff and proceeds to attack the plaintiff's private character in open court.

(*b*) A barrister having respectfully differed from a learned judge, is told by the judge that he is ignorant and impertinent and a disgrace to his profession.

(*c*) A registrar in Bankruptcy commits a witness to prison for not satisfactorily answering the questions addressed to him.

(*d*) Saffron Walden is in Essex, Linton in Cambridgeshire. The Judge of the County Court of Essex, sitting at Saffron Walden, sentences a Linton man to prison for contemptuously neglecting to pay a debt due to a trader in Saffron Walden.

(*e*) A native judge in India in 1883 sentenced an Englishman to imprisonment.

(*f*) A judge of the Chancery Division while on a visit at Brighton in the Easter vacation, was applied to for a *habeas corpus* and a copy of the warrant shewn to him. He declined to have anything to do with it, saying he had no jurisdiction.

(*g*) A material witness against a prisoner committed for trial on a charge of felony, refused to be bound over to appear at the Quarter Sessions to give evidence against him, saying that she would not go to Maidstone, and nobody should make her. After fully explaining the matter and expending nearly an hour in the attempt to persuade her to go, the committing magistrate issued a warrant by virtue of which she was taken to Maidstone, and gave her evidence, and the prisoner was convicted; without her evidence he could not have been convicted.

MONDAY, *May* 26, 1884. 1—4.

THE CIVIL AND CRIMINAL JURISDICTION EXERCISED BY CIVILIZED STATES OVER FOREIGNERS.

1. How far is the extradition of criminals recognised as an International duty? What were the chief points debated in the 'Winslow' case?

2. Compare the rules of the French and English tribunals with respect to their competency to entertain suits between undomiciled foreigners.

3. Explain the present state of International Law with respect to the immunity of ambassadors from the civil and criminal jurisdiction of the countries to which they are accredited.

4. To what extent do the tribunals of the leading European States take cognizance of crimes committed by foreigners in foreign countries?

5. Discuss the liability of aliens to serve in the army or militia of the state in which they are resident.

6. A foreign sovereign applied to an English court for an injunction to restrain the infringement of his exclusive right of issuing paper currency to circulate within his dominions. Do you consider that such an injunction would be sustainable? If so, on what ground?

7. To what extent is a ship of war exempted from the local jurisdiction when in territorial waters?

8. *A*, a foreigner, is a partner in the English trading firm of *B* and *Co.* He is domiciled and resident abroad and does not personally buy or sell in England. Has the English Court of Bankruptcy jurisdiction to make an adjudication of bankruptcy against him?

9. *A*, an American traveller, forges Bank of England notes and gives one of them to an hotel keeper in St Petersburg in part payment of his bill. After passing through several hands the note is presented at the Bank of England and the forgery is detected. *A* shortly afterwards visits England and is arrested. Have the English courts jurisdiction to try the case?

10. A public ship of a foreign state, carrying mails and also merchandize and passengers for hire, was stranded on the English coast. Important salvage services were rendered by a private vessel; a suit was instituted in an English court on behalf of certain of the salvors against the owners of the cargo. The court held that it had no jurisdiction to entertain the suit. Discuss the propriety of this decision.

11. Two Norwegian sailors quarrel and fight on board an English merchant vessel in the port of Bordeaux. One of them is killed. In what court will the survivor be tried?

12. A French vessel, engaged in the slave trade, was captured by a British cruizer on the coast of Africa after resistance made to a demand to visit and search. She was carried to Sierra-Leone and condemned by the Court of Vice-Admiralty for being concerned in the slave trade contrary to the French Law. Comment on this decision.

TUESDAY, *May* 27, 1884. 9 to 12.

THE LAW OF SALES OF CHATTELS PERSONAL.

1. DISTINGUISH carefully between an executory and an executed contract of sale, and apply your tests to the following cases:

(1) *A* by contract in writing on April 23rd agrees to sell to *B* certain oat stacks then standing upon *A*'s ground, on the following terms:—*A* is to allow the stacks to stand on his ground until the middle of August, if *B* should wish them to remain: and *B* is to make payment by the 16th of July. *B* fails to pay by the 16th of July, but tenders the money on the 17th, when *A* declines to receive it, and sells the stacks to *C*. Has *B* any and what remedy against *A*? If the stacks had been consumed before the 16th of July without any default of *A*, whose would have been the loss?

(2) *D* agrees to sell to *E* bark stacked at *X* at £10 per ton, which *E* agrees to take and pay for on the 1st of July. Five tons of the bark having been duly weighed and delivered to the purchaser, the remainder is destroyed by a flood. Is the purchaser liable to pay for more than the five tons?

2. In what cases and subject to what restrictions may a vendor of stolen goods pass a good title to a purchaser?

3. In what cases is a warranty as to title or quality implied on the part of a vendor of goods?

A pawnbroker having advertised a sale of goods taken in pledge, one of the articles is sold to *B*, and is recovered from him by a party claiming title thereto as against the pawnor. Has *B* any remedy against the pawnbroker?

4. In what cases will an action be maintainable by a purchaser against the vendor for misrepresentation as to the quality of the chattel sold? Is there any case in which such an action may be brought by a third party?

5. What is the method provided by the Merchant Shipping Act, 1854, for the transfer of a British ship or any share therein? and what declaration must be made by the transferee? What is the effect of the voluntary acquisition by an unqualified person of any interest in a ship using the British flag?

6. How are "bills of sale" and "personal chattels" defined in the Bills of Sale Act of 1878 (Stat. 41 and 42 Vict. c. 31)? What bills of sale are void under the Act of 1882 (Stat. 45 and 46 Vict. c. 43)? Enumerate the classes of bills of sale to which these Acts do not apply.

7. A lot of goods is sold by auction and knocked down to a bidder for £20. The auctioneer writes the name of the bidder, and the price, against the name of the lot in the catalogue. In case the bidder should repudiate the contract, will the note of the auctioneer be a sufficient memorandum to charge the bidder within the meaning of the Statute of Frauds?

At a sale of goods by auction, several of the lots failed to secure a purchaser. A few days afterwards *B* called on the auctioneer, and selected from the catalogue one of the unsold lots, which he agreed to purchase for £20. The auctioneer then, in *B*'s presence, wrote *B*'s name and the agreed price in the catalogue opposite the lot selected. Upon these facts alone, can the contract be enforced against *B*?

8. Explain the nature of a bill of lading, and the course of dealing with it, and the rights and liabilities arising therefrom, whether by statute or otherwise. Refer to any recent decisions of the House of Lords on the subject.

9. What is meant by a vendor's right of stoppage *in transitu*? In what ways may the right be exercised, and in what ways may it be terminated?

Goods are shipped by a vendor in New York in pursuance of a contract for sale made with a purchaser in London. The ship having called at Plymouth, a friend of the vendor, having heard of the purchaser's bankruptcy, communicates with the master of the vessel to stop *in transitu*. The master declines to deliver the goods, on the ground that the stoppage is made without the vendor's authority. The vessel proceeds to London, where the purchaser's trustee takes possession of them for the creditors. The vendor subsequently ratifies the act of stoppage. Is the ratification effectual under these circumstances?

10. Explain what is meant by a document of title to goods, and give the provisions of the Factors' Act, 1877 (Stat. 40 and 41 Vict. c. 39).

TUESDAY, *May* 27, 1884. 1—4.

ROMAN LAW.

1. GIVE a short history of the Praetorian Edict, from its origin to the time of Julian, shewing the manner in which it was made and the sources from which it appears to have been derived. Discuss the advantages and disadvantages of this mode of legislation.

2. What are our authorities as to the contents of Julian's edict, its scheme and order?

State and discuss the theory of Rudorff upon the latter subject.

3. Translate and explain:

Si quis ius dicenti non obtemperaverit. Dig. 2. 3. R.

Hoc iudicium non ad id quod interest, sed quanti ea res est concluditur: et cum meram poenam contineat, neque post annum neque in heredem datur.

Dig. 2. 3. 4.

4. Translate:

Intendit hoc modo: Iudex esto. si quem hominem Aulus Agerius emit, et is ei traditus est, anno possedisset, tum si eum hominem de quo agitur eius ex iure Quiritium esse oporteret et reliqua.

Name this formula and describe the class of which it is an instance.

5. Account for the place or places which the following subjects appear to have occupied in the edict:

(*a*) Editio rationum; (*b*) Infamia; (*c*) Nautae, caupones, stabularii; (*d*) Minores XXV annis; (*e*) Testamenta; (*f*) Damnum infectum; (*g*) Senatus consultum Macedonianum; (*h*) Furtum.

Where, in order of procedure, does *in ius vocatio* come under the Decemviral system, under that of Hadrian, and under that of Justinian?

6. Translate, with brief notes:

Ait praetor: In eum, qui emancipatus aut exheredatus erit quive abstinuit se hereditate eius cuius in potestate cum moritur fuerit, eius rei nomine, quae cum eo contracta erit, cum is in potestate esset, sive sua voluntate sive iussu eius in cuius potestate erit contraxerit, sive in peculium ipsius sive in patrimonium eius cuius in potestate fuerit ea res redacta fuerit, actionem causa cognita dabo in quod facere potest.

7. Explain the following words and phrases: *editio, postulatio, causâ cognitâ, pecunia constituta, actio de aestimato, solum vertere, separatio, precarium.*

8. Translate:

Si quis ex servitute in libertatem proclamat, petitoris partes sustinet: si vero ex libertate in servitutem petatur, is partes actoris sustinet qui servum suum dicit. igitur cum de hoc incertum est, ut possit iudicium ordinem accipere, hoc ante apud eum, qui de libertate cogniturus est, disceptatur, utrum ex libertate in servitutem aut contra agatur.

Give the name of this particular issue, and describe the class of proceedings to which it belongs.

9. Translate:

Uti ex lege locationis sive conductionis superficie, qua de agitur, nec vi nec clam nec precario alter ab altero fruemini, quo minus fruamini, vim fieri veto. si qua alia actio de superficie postulabitur, causa cognita dabo.

Give the substance of any *restitutory* Interdict.

Account for the order in which Interdicts and Exceptions are treated in the Edict and in the Institutes of Gaius.

10. Translate and explain:

(*a*) Exceptio iusti dominii Publicianae obicienda est. Publiciana actio non ideo comparata est, ut res domino auferatur: eiusque rei argumentum est primo aequitas, deinde exceptio si ea res possessoris non sit: sed ut is, qui bona fide emit possessionemque eius ex ea causa nactus est, potius rem habeat.

(*b*) Habet stipulatio (de usu fructu legato) duas causas, unam, si aliter quis utatur quam vir bonus arbitrabitur, aliam de usu fructu restituendo. quarum prior statim committetur, quam aliter fuerit usus, et saepius committetur, sequens committetur finito usu fructu.

How must this stipulation be varied in the case of *res quae ipso usu consumuntur?*

(*c*) Illum hominem sanum esse, furem, vespillonem, fugitivum, erronem non esse, furtis noxaque solutum esse praestari, et si quis eum hominem partemve quam ex eo evicerit quominus me (emptorem) eumve ad quem ea res pertinebit habere recte liceat, quanti id erit quod ita evictum fuerit, tantam pecuniam duplam dari spondes? Spondeo.

LAW TRIPOS.

SATURDAY, *May* 17, 1884. 9—12.

ROMAN LAW. I.

1. TRANSLATE, commenting upon the words and phrases italicised:

Sed istae omnes legis actiones paulatim in odium venerunt. namque ex nimia subtilitate veterum qui tunc *iura condiderunt* eo res perducta est, ut vel qui minimum errasset litem perderet. itaque per legem Aebutiam et duas Iulias sublatae sunt istae legis actiones effectumque est, ut per *concepta verba*, id est per formulas litigaremus. Tantum ex duabus causis permissum est *lege agere: damni infecti*, et si *centumvirale iudicium* fit. proinde vel hodie cum ad centumviros itur, ante lege agitur sacramento aput Praetorem urbanum vel peregrinum. damni vero infecti nemo vult lege agere, sed potius stipulatione quae in edicto proposita est obligat adversarium suum, quod et commodius ius et plenius est.

2. In regard to question 1:

(*a*) Set forth in full your reasons for dating the three statutes mentioned.

(*b*) Discuss the immediate cause of the change referred to, as appearing either from the passage cited or from any other original source of information—the character of that change itself—and its effects upon the subsequent developement of Roman law.

3. Translate:

Sciendum est suspecti crimen ex lege duodecim tabularum descendere. Datum est autem ius removendi suspectos tutores Romae Praetori et in provinciis Praesidibus earum et Legato Proconsulis. Ostendimus qui possunt de suspecto cognoscere: nunc videamus qui suspecti fieri possunt. Et quidem omnes tutores possunt, sive testamentarii sint, sive alterius generis tutores. quare etsi legitimus sit tutor, accusari poterit. quid si patronus? adhuc idem erit dicendum; dummodo meminerimus famae patroni parcendum, licet ut suspectus remotus fuerit. Consequens est, ut videamus qui possunt suspectos postulare. Et sciendum est quasi publicam esse hanc actionem, hoc est omnibus patere. quinimo et mulieres admittuntur ex rescripto divorum Severi et Antonini, sed hae solae quae pietatis necessitudine ductae ad hoc procedunt.

Define the *auctoritas* of a *tutor* and state generally in what cases it is, and in what cases it is not, required.

4. State the heads of subject-matter in the first book of the Institutes, shewing how each principal topic is introduced. Hence deduce and illustrate your own view as to the distinction intended between *ius quod ad personas pertinet* and *ius quod ad res pertinet*, stating and discussing the view held by any other modern authority. Trace the history of this distinction in Roman times, and its effects upon modern law.

5. Explain the following words and phrases:

Locus religiosus, ferae naturae, specificatio, tabula picturae cedit, stipendiaria praedia, iura praediorum, habitatio, usucapio. On the last-named subject shew how the law as stated by Gaius had become inefficient under Justinian, and how it was reformed by that emperor.

6. Describe and date the principal stages of the power to dispose of property by will, at Roman law, from the earliest times to that of Justinian.

7. Translate:

Si plures (heredes) instituantur, ita demum partium distributio necessaria est, si nolit testator eos aequis ex partibus heredes esse: satis enim constat, nullis partibus nominatis, ex aequis partibus eos heredes esse. Partibus autem in quorundam personis expressis, si quis alius sine parte nominatus erit, si quidem aliqua pars assi deerit, ex ea parte heres fiet; et si plures sine parte scripti sunt, omnes in eandem partem concurrent. si vero totus as completus sit, in partem dimidiam vocantur, et ille vel illi omnes in alteram dimidiam. nec interest, primus, an medius, an novissimus sine parte scriptus sit: ea enim pars data intellegitur quae vacat.

Explain *heres ex besse, pupillaris substitutio, inofficiosum testamentum, suus heres.* What was the practical effect of the recognition of *codicilli?*

8. Translate:

Sponsores quidem et fidepromissores et fideiussores saepe solemus accipere, dum curamus ut diligentius nobis cautum sit. adstipulatorem vero fere tunc solum adhibemus, cum ita stipulamur, ut aliquid post mortem nostram detur: quod cum stipulando nihil agimus, adhibetur adstipulator, ut is post mortem nostram agat: qui si quid fuerit consecutus, de restituendo eo mandati iudicio heredi nostro tenetur.

State generally the result of the laws *Furia, Apuleia, Cicereia* and *Cornelia.*

9. *A* is bound by verbal obligation to pay a sum of money, by a certain day, to *B*. *C* is surety for the payment. *D*, hearing that *A* and *C* are not ready with the money, pays it and discharges the obligation. Give the technical names, at Roman law, of each of the parties concerned, and state the remedies available to *C* and *D* respectively.

10. Explain under what form or mode of law you would classify the extracts in the Digest, independently of the statutory character given them by Justinian.

SATURDAY, *May* 17, 1884. 1—4.

ROMAN LAW. II.

1. ENUMERATE and account for the various meanings which the term *ius civile* bears in the Institutes and the Digest of Justinian.

2. State what is known of the life of Ulpian. Give the titles of his principal works, and state any peculiarities, either of style or views, which distinguish him from other Roman jurists.

3. Partnership has been defined as "the relation which subsists between persons who have agreed to combine their property, labour, or skill in some business and to share the profits." Illustrate the several points of this definition, from Roman Law.

4. State the different kinds of partnership enumerated by Ulpian and illustrate them, as far as possible, by modern instances.

5. *A* and *B*, separately engaged in business, agree to club their horses together in order to run a carriage and pair from their private residences to town, and *A* sends his horse to *B*'s stables for this purpose. The horse accidentally dies. Upon whom does the loss fall and why?

6. Translate, clearly identifying the parties:

Qui admittitur socius, ei tantum socius est qui admisit, et recte: cum enim societas consensu contrahatur, socius mihi esse non potest quem ego socium esse nolui. quid ergo si socius meus eum admisit? ei soli socius est (nam socii mei socius meus socius non est) et quicquid fuerit de societate nostra consecutus, cum illo qui eum adsumsit communicabit, nos cum eo non communicabimus. sed factum eius praestabitur societati, id est aget socius et societati praestabit quod fuerit consecutus. Ex contrario factum quoque sociorum debet ei praestare sicuti suum, quia ipse adversus eos habet actionem. De illo Pomponius dubitat, utrum actionem eum mandare sociis sufficit, ut, si facere ille non possit, nihil ultra sociis praestet, an vero indemnes eos praestare debeat. et puto omnimodo eum teneri eius nomine, quem ipse solus admisit, quia difficile est negare culpa ipsius admissum.

7. Translate and explain:

(*a*) Rei communis nomine cum socio furti agi potest, si per fallaciam dolove malo amovit vel rem communem celandi animo contrectet: sed et pro socio actione obstrictus est, nec altera actio alteram tollet. idemque in omnibus bonae fidei iudiciis dicendum est. Sed si ex causa furtiva condixero, cessabit pro socio actio, nisi si pluris mea intersit. Si damnum in re communi socius dedit, Aquilia teneri eum et Celsus et Iulianus et Pomponius scribunt.

(*b*) Si in coeunda societate, inquit (Celsus), artem operamve pollicitus est alter, veluti cum pecus in commune pascendum aut agrum politori damus in commune quaerendis fructibus, nimirum ibi etiam culpa praestanda est: * pretium enim operae artis est velamentum.

* Suggested emendation "pretium enim est operae artisve levamentum."

8. Translate:

(*a*) Idem (Papinianus) respondit societatem non posse ultra mortem porrigi, et ideo nec libertatem de supremis iudiciis constringere quis poterit vel cognatum ulteriorem proximioribus praeferre.

(*b*) Adeo morte socii solvitur societas, ut nec ab initio pacisci possimus, ut heres etiam succedat societati. haec ita in privatis societatibus ait: in societate vectigalium nihilo minus manet societas et post mortem alicuius, sed ita demum, si pars defuncti ad personam heredis eius adscripta sit, * ut heredi quoque conferri oporteat: quod ipsum ex causa aestimandum est. quid enim, si is mortuus sit, propter cuius operam maxime societas coita sit aut sine quo societas administrari non possit?

* Suggested emendation "et."

How do you reconcile the following passage (which is not to be translated) with the above?

In heredem quoque socii pro socio actio competit, quamvis heres socius non sit: licet enim socius non sit, attamen emolumenti successor est. et circa societates vectigalium ceterorumque idem observamus, ut heres socius non sit nisi fuerit adscitus, verumtamen omne emolumentum societatis ad eum pertineat, simili modo et damnum adgnoscat quod contingit, sive adhuc vivo socio vectigalis sive postea: quod non similiter in voluntaria societate observatur.

9. (*a*) Trace the later meaning of *condictio* from the use of that word in the *legis actiones.*

(*b*) Explain the statement:

Per pignoris capionem lege agebatur, de quibusdam rebus moribus de quibusdam lege.

10. State the principal consequences of a *iudicium* being *bonae fidei,* with especial reference to partnership. What was *condemnatio in id quod facere potest,* and to whom was it allowed?

11. Give a brief historical sketch of the use of *interdicts.*

MONDAY, *May* 19, 1884. 9 to 12.

REAL AND PERSONAL PROPERTY. I.

1. WHAT is the present method of barring an estate tail? In what cases is there a protector to the settlement, and what is the extent of his powers? Who is generally the protector to the settlement, and has the settlor any discretion in the appointment of a protector?

2. What effect had the passing of the Statute of Wills (32 Henry VIII. c. 1) upon the liability of lands to satisfy the specialty debts of a deceased tenant in fee simple? Trace the course of subsequent legislation by virtue of which lands have been made liable to the debts of their deceased owners. Have specialty creditors of a deceased person any priority over simple contract creditors at the present day?

3. Explain and illustrate the meaning of the following phrases:—Heir at Law, Heir by Custom, Heir Apparent, Heir Presumptive.

4. What is meant by a lapsed devise?

A testator devises Whiteacre to his son *A*, who dies in the testator's lifetime leaving a son *B* who survives the testator. *A*'s assets are not sufficient to satisfy his creditors. Will Whiteacre be liable to the claims of *A*'s creditors?

5. Explain the nature and extent of the estates of dower and curtesy, and state under what circumstances they come into existence (1) in ordinary freeholds, (2) in gavelkind lands. How has a widow's right to dower been affected (1) by the Statute of Uses, (2) by the Dower Act of 1833?

6. State the "Rule in Shelley's case."

Whiteacre is settled to *A* for life, with remainder to *B* for life, with remainder to the heirs of the body of *A*. Blackacre is settled to *A* for 100 years, remainder to *B* for life, remainder to the heirs of the body of *A*. What estate does *A* take in Whiteacre and Blackacre respectively?

7. To what class of estates less than freehold did copyholds originally belong? What is meant by surrender and admittance? To what extent may a copyhold tenant convey his estate by methods applicable to freeholds?

8. In what cases may a mortgagee exercise his power of sale under the Conveyancing and Law of Property Act, 1881?

9. What covenants for title are implied by a vendor who is expressed to convey as beneficial owner in the case of (1) freeholds, (2) leaseholds for years?

10. What is meant by prescription in English Law? State the provisions of the Prescription Act of 1832 in reference to "ways, watercourses, and other easements."

MONDAY, *May* 19, 1884. 1—4.

REAL AND PERSONAL PROPERTY. II.

1. DEFINE the following terms:

(*a*) Hotchpot.
(*b*) A bill of lading.
(*c*) An executor *de son tort*.
(*d*) Restraint upon anticipation.
(*e*) An administrator *de bonis non*.
(*f*) Ademption.

2. A testator left a legacy to a man to whom he owed money. Must the executors pay both the debt and the legacy?

3. *A* dies intestate leaving his mother, his wife, a brother, and the son of a deceased sister him surviving. Who takes his personal property and in what shares?

4. *A*, *B*, and *C* carried on business as "*A*, *B*, and *Co.*" *C* owed *Z* £50; but *Z* owed the firm £80. *Z* gave *C* £30 and a receipt for his £50. *C* gave *Z* a receipt for £80 in the name of the firm. Have *A* and *B* any action and if so against whom?

5. What leases may be made by parol? What leases are required to be made by deed?

In February, 1876, *A* and *B* signed an agreement for a lease of a house for a term of seven, fourteen, or twenty-one years. *B* took possession at Lady Day, 1876, and still resides there. Can he give notice to quit next Lady Day? Can *A* give him notice to quit?

6. What *choses in action* may now be assigned at law? What steps should the assignee take to complete his title?

A owes *B* £100; *B* on May 1st assigns the debt in writing to *C*, who the same day sends notice to *A* by a letter which is lost in the post and never reaches *A*. *B* on May 10th assigns the debt to *D*, who the following day gives verbal notice to *A* of the assignment to him. Which has the better title, *C* or *D*? And in whose name must he sue? Would it make any difference if the assignments were by way of mortgage only? Would it make any difference if either assignment was made without consideration?

7. *A* hired a piano from a Company on the "Three Years System," by which it will become his property at the end of three years, if he pays the instalments regularly. *A* pledges the piano to *B* for £20, promising to repay the £20 and redeem the piano on April 1st, 1884. This he does not do. Can *B* sell the piano? Can the Company recover the piano from *B*?

8. Define a power. If the donee of a general power of appointment exercise it in favour of a stranger, can the creditors of the appointor in any and what event claim the fund against the appointee or purchasers from the appointee? How if the appointor be a married woman?

If *A* be tenant for life of Blackacre, with a power of leasing it for 99 years, and sells his life estate to *B*, can he afterwards exercise his power and execute a lease of Blackacre for 90 years to *C*?

9. *L* was a money-lender; yet he refused to lend *M* any more money unless he got a friend "to lend his name." *M* brings *N* who in the presence of *L* accepts a bill for £100 at three months drawn on *N* by *M* in favour of *L*. *L* then advances *M* £80 only, none of which ever goes to *N*. The three months having expired, *L*, without ever applying to *M* for the money, has issued a writ against *N* for £100, though he knows quite well that no consideration passed between *N* and *M*. Does the action lie?

10. *M* in 1879 let a farm to *D* for a term of seven years at a rental of £300 a year, payable quarterly. *M* died intestate on February 2nd, 1884. On March 2nd, 1884, *M*'s administrator sued *D* for the portion of rent due from Christmas, 1883, to February 2nd, 1884. On the 28th March, *N*, who is *M*'s heir-at-law, sued *D* for the quarter's rent due at Lady-day. On April 5th, *P*, who alleges that *M* was only a tenant for life and that he *P* is the remainder man, sues *D* for the portion of rent due from February 3rd, 1884, to Lady-day. Advise *D*, the tenant as to the course he should take.

TUESDAY, *May* 20, 1884. 9—12.

CRIMINAL LAW.

1. EXPLAIN the meaning of the term 'Malice' in its application to Murder and Libel, and discuss the expediency of retaining it.

A intentionally set fire to a stack of straw in an enclosure in which there was an outhouse or barn, but no house. The body of a man was afterwards found burnt in the enclosure. In the trial for murder which ensued what directions do you consider that the judge ought to have given to the jury?

2. Under what circumstances and within what limits does 'Provocation' extenuate the guilt of homicide?

3. State the essentials of 'Larceny,' and give two imaginary cases to illustrate the distinction between 'Larceny' and 'Embezzlement.'

4. Give a short historical sketch of the law relating to 'Conspiracy.'

5. *A*, by bribing a groom, obtained admission at midnight to the stable of *B*, an owner of race-horses, and lamed one of the horses in order to prevent it from running in a race. For what offence might *A* be indicted, and what must be proved in order to obtain a conviction?

6. Explain the meaning and discuss the value of the distinction between 'Direct' and 'Circumstantial' evidence.

7. To what extent does the existence in a criminal of an insane delusion affect his responsibility?

8. *A*, a constable, arrests *B* under a warrant which proves to be defective; *C* and *D*, relatives of *B*, who are aware of the illegality of the warrant, plan and carry out a rescue, in the course of which *A* is unintentionally killed. What offence have *C* and *D* committed?

9. State what offence (if any) is committed in each of the following cases:—

(*a*) A railway passenger gives a sovereign to a porter to get it changed; the porter returning with the change finds that the passenger's train has started. He then pockets the change.

(*b*) *A*'s wife, in *A*'s absence receives a valuable book, which she knows to have been stolen from a public library; *A*, on returning and hearing of the transaction, allows the book to remain on his shelves.

(*c*) *A* pledges his coat, afterwards takes it away from the pawnbroker's without his consent.

10. Explain, and illustrate by examples, the 'intent to defraud' which is a necessary ingredient of Forgery.

TUESDAY, *May* 20, 1884. 1—4.

JURISPRUDENCE.

AUSTIN, LECTURES 1, 5, 6 AND 12—27.

1. DEFINE and distinguish "Morality" and "Positive Morality."

How far is either included in the terms "Law," "Law of God," "Positive Law"?

2. Are any and which of the following commands "laws"? Are any and which of them "positive laws"? And if not, why not?

(*a*) The Sultan bids the Mahdi rebel against the Khedive.

(*b*) The Sultan forbids all Egyptians to assist the English in any way.

(*c*) A college tutor forbids certain acts on pain of rustication.

(*d*) The Land League in 1881 announces that any one dealing with Captain Boycott shall himself be "boycotted."

(*e*) A parish priest living in County Cork announces in 1881 that he will not permit any one to attend mass who deals with any person "boycotted" by the Land League.

(*f*) An Inn of Court declares that any barrister accepting a brief from a litigant in person without the intervention of a solicitor shall be disbarred.

3. State your objections to *ex post facto* legislation.

4. Is the Dominion of Canada a political and independent society as defined by Austin? Is Scotland? Is Hungary? Is Monaco? Is the University of Cambridge? Is the crew of a man-of-war, shipwrecked on a desert island? If not, why not?

5. Comment on and explain the following passages in Austin's Lectures:

"There are no laws merely creating rights."

"A sovereign has no legal rights."

"Laws are sometimes sanctioned by nullities."

6. Define and distinguish a *jus in rem*, a *jus in personam*, and a *jus in re aliená*. Which does *X* possess in each of the following cases?

(*a*) *X* buys some furniture which is to be sent to his new house, as soon as he returns from his honeymoon.

(*b*) *X* lends *A* £1000 on mortgage.

(*c*) *X* bids at an auction for a valuable picture; no one has bid higher: but the hammer has not yet fallen.

(*d*) *M* writes a letter to *X* "I hope you will have no hesitation in fishing in my trout-stream whenever you feel inclined."

(*e*) *Y* bought Whiteacre of *X* for £10,000, and induced *X* to convey it to him before receiving the purchase-money. *Y* at once re-sells it to *Z* for £9,000, with which sum *Y* promptly absconds.

(*f*) *X* has an ancient window overlooking *N*'s meadow. *N*'s son, aged 12, flings a stone through it.

7. Explain the following legal notions:
   Thing.
   Act.
   A consilium or compassing.
   Furious anger.
   Heedlessness.

8. Criticize and explain the following:
   "Will implies Intention; Intention does not imply Will.'
   "I intend a consequence from which I am averse."

9. "Generaliter injuria dicitur omne quod non jure fit" (Inst. IV. iv. 1). Criticize this definition, and give a better if you can.

10. Classify presumptions, giving instances. How do you distinguish a presumption from an estoppel and from a legal fiction? What presumptions would be drawn from the following facts:

(*a*) A vendor executes a conveyance of a messuage in the presence of a solicitor. The conveyance recites that the vendor has a good title to convey the fee simple, that the purchaser has paid the purchase-money, that the premises are in good repair and the drains in good order, &c., &c.

(*b*) The oldest inhabitants of a village assert that for the last fifty years the villagers have without hindrance from anyone walked along a certain path to the church and danced on the village green.

WEDNESDAY, *May* 21, 1884. 9 to 12.

CONSTITUTIONAL HISTORY OF ENGLAND.

1. WHAT causes operated in the reigns of George the First and George the Second to diminish the personal influence of the Sovereign in the public affairs of the country?

2. What innovations in the fiscal law does Hallam enumerate as being prejudicial to the fair administration of justice between the Crown and the subject?

3. State briefly the nature of the offences charged against (1) the printer Mist, (2) Alexander Murray, and the proceedings taken against them respectively.

4. What officers were declared incapable of sitting in the House of Commons by Stat. 15 Geo. II. c. 22? and what penalties were imposed upon persons sitting and voting contrary to the provisions of the Act?

5. What were the doctrines held by the judges at the commencement of George the Third's reign as regards the functions of a jury upon a trial for libel? Give an account of the cases in which this question arose, and state how it was finally disposed of.

6. State shortly the proceedings taken in the House of Commons consequent upon the election of John Wilkes for the county of Middlesex.

7. What were the circumstances which led to the passing of the Royal Marriage Act? Give a brief statement of its provisions.

8. What attempts were made in the reign of George the Third to restrain the traffic in parliamentary seats? On what grounds did Sir Samuel Romilly justify the purchase of a seat in parliament? State briefly the import of Mr Curwen's Act (Stat. 49 Geo. III. c. 118).

9. What were the resolutions agreed to by the Commons in December, 1810, with reference to the King's incapacity? State briefly the limitations and exceptions to the powers conferred upon the Prince Regent by the Regency Act of 1811 (Stat. 51 Geo. III. c. 1).

10. Give a summary, with dates, of the relaxations effected in the penal laws of this country prior to the accession of Queen Victoria.

WEDNESDAY, *May* 21, 1884. 1—4.

INTERNATIONAL LAW.

1. IN what way does International Law undergo change? Discuss the general tendency of recent changes.

2. Under what circumstances may 'Recognition of Belligerency' be rightly accorded to rebels? Explain the full effect of such recognition.

3. Mention the principal exceptions to the rule that the Territory and Jurisdiction of a State are coextensive.

4. Give some account of the dispute between England and the United States on the subject of the Navigation of the St Lawrence, and sum up shortly the rules which now govern the navigation of rivers.

5. What is necessary in order to constitute a valid 'Military Occupation' of hostile territory? Explain the effect of such Occupation, and illustrate your answer by reference to recent practice.

6. Give the chief provisions of the English Foreign Enlistment Act of 1870 and show how far they agree with and where they differ from (*a*) the previously existing rules of International Law; (*b*) the rules laid down by the Geneva Arbitrators and embodied in the Treaty of Washington.

7. How far is the consent of the inhabitants a necessary condition to the transfer of territory?

8. How does the outbreak of war between two states affect the position of individual members of each?

9. State the essentials of Piracy (jure gentium) and illustrate your answer by reference to the case of the 'Huescar'.

10. Explain the following:—(*a*) 'Circuitous Voyage'; (*b*) 'Analogues of Contraband'; (*c*) 'Semi-Sovereignty'; (*d*) 'Commercia Belli'.

11. Mention the principal points on which English and Continental jurists are at issue with respect to the Law of Blockade.

FRIDAY, *May* 23, 1884. 9—12.

ESSAYS AND PROBLEMS.

[N.B. *Not more than* eight *to be attempted.*]

1. TRANSLATE:

Antoninus Pius cognominatus...ius Romanae civitatis...omnibus in commune subiectis donavit.

Justiniani Novella 78.

Omnes libertos nullo nec aetatis manumissi nec dominii manumissoris nec in manumissionis modo discrimine habito, sicuti antea observabatur, civitate Romana donavimus: multis additis modis, per quos possit libertas servis cum civitate Romana, quae sola in praesenti est, praestari.

Justiniani Institt. 1. 5. 3.

Compare these two passages, discussing the date, object, and effect of the enactment mentioned in the former. Explain and reconcile any apparent discrepancy of the two statements.

2. Discuss the origin, development and chronological order of the four classes of contracts recognised by Gaius.

3. Compare the influence of Roman legislation upon the legal system of England and upon that of France or Germany.

4. Write an Essay on Customary Law.

5. A mortgagee took possession of the mortgaged lands, and sold certain outlying portions, and then died in September, 1881. His executors found among his papers a statement of account, dated Christmas, 1880, which, after giving credit for the proceeds of various sales, shewed a balance still due to him of £493. 8*s*. 1*d*. The executors made no enquiries, but in May, 1882, transferred the mortgage to *X*, representing to him that £493. 8*s*. 1*d*. and interest from Christmas, 1880 was still due and owing on the mortgage. The deed of transfer which both executors and *X* executed, contained an express recital to that effect. Now the mortgagor has sued both the executors and *X* for an account, and has proved that the account was erroneous, that the mortgagee had sold more land in April, 1881, and that nothing at all was due on the mortgage when the mortgagee died. *X* was thereupon ordered to reconvey the lands to the mortgagor. Has he any and what remedy against the executors, and if so, are they personally liable; or is *X* estopped by his deed?

6. *A* conveyed lands to *B* in fee, *B* covenanting for himself and his assigns that he and they would never permit any building on the land conveyed to be used as a public-house, and also that he and they would from time to time contribute one-eighth of the reasonable expenses of repairing a road by which the land was approached from the public highway. *B* has since conveyed to *C* in fee. Now *C* has let one of the houses to a publican who is converting it into a tavern; he has already constantly used the road, and yet refuses to pay the eighth share of the expense of repairing it. Has *A* any and what remedy in either case?

7. A testator, having a wife and three children, and being seised of estates in fee simple of ordinary tenure, devises his real estate to trustees upon trust to sell and divide the proceeds between his children. Two of the children die intestate and unmarried, one shortly before and the other shortly after the testator's death. In what proportions will the widow and the surviving child be entitled to share in the proceeds of the testator's real estate; and will there be any difference in the result (1) according as the testator has in his will described his children generally as "my children" or specifically as "my children *A*, *B* and *C*," (2) according as the children or any of them are sons or daughters?

8. *A*, a merchant in Hull, agrees with *B*, a London tradesman, for the delivery of goods on board a vessel to be chartered by *B* and sent to Hull to receive the goods; the payment to be made on the delivery of the bills of lading to *B* in London. The vessel is duly sent to Hull in pursuance of the agreement. On the arrival of the vessel, *A*, having received intelligence that *B* has been made a bankrupt, refuses to deliver the goods. Can *B*'s trustee in bankruptcy maintain an action against *A* for breach of contract?

9. Write an essay on the nature and objects of Parliamentary Impeachment.

10. *A*, an English merchant, resident in England but in partnership with the trading firm of *B* and *C* of Bordeaux, bought certain goods in New York, shortly before the outbreak of hostilities between England and the United States in 1812. Immediately war was declared *A* sent a ship to New York to bring home his property. While the ship was on its return voyage *A* sold the cargo to *D*, a Frenchman living at Bordeaux. Shortly afterwards the ship was captured by an English man-of-war. What would be the probable fate of the cargo in an English Prize Court?

11. *A*, a clerk in the office of *X* and *Co.*, millers and corn-dealers, was on one occasion taken from his ordinary duties and sent to a neighbouring town in charge of a canal barge loaded with flour, with instructions to sell the flour for the best price he could get. He sold the flour, but kept back part of the money he received for it, and on the return voyage he took a cargo, without any authority from his employers, and appropriated the freight to himself. Explain the nature of his offence.

12. Write an Essay on Non-Intervention.

HISTORICAL TRIPOS.

MONDAY, *May* 26, 1884. 9—12.

GREEK HISTORY. 510 B.C.—404 B.C.

1. WHAT changes were introduced into the Athenian constitution (1) by Cleisthenes, (2) by subsequent democratic reformers?

2. "The Greek political mind, beginning from entire severance of states, became gradually prepared for the idea of a permanent league, with mutual obligations, and power of enforcement vested in a permanent chief." Illustrate this passage by reference to events previous to the battle of Platea.

3. Thucydides makes an Athenian say:

"*Καὶ γὰρ αὐτὴν τήνδε (τὴν ἀρχὴν) ἐλάβομεν οὐ βιασάμενοι.....ἐξ αὐτοῦ δὲ τοῦ ἔργου κατηναγκάσθημεν τὸ πρῶτον προαγαγεῖν αὐτὴν ἐς τόδε μάλιστα μὲν ὑπὸ δέους, ἔπειτα δὲ καὶ τιμῆς ὕστερον καὶ ὠφελείας.*"

Translate and examine the truth of this passage.

4. Describe the fortifications and architectural adornments of Athens as she stood at the death of Pericles. What do you know as to the industrial and commercial occupations and the religious observances of the citizens?

5. Set forth the contrast drawn by Thucydides between Pericles and the Athenian politicians who followed him. Examine and illustrate by reference to Athenian foreign policy down to the sailing of the Sicilian expedition.

6. Describe the position held by Syracuse in Sicily at the date of her collision with Athens, and give an account of the events which led to that expedition.

7. What light do events during this period throw (1) upon international law and procedure and the rules of war which obtained among the Greeks? (2) upon the relations held to exist between a mother state and a colony?

8. Examine the working of Athenian institutions by the light of her internal history from 413 B.C. to 404 B.C.

9. Examine the connexion between Athenian philosophy, education and political life.

MONDAY, *May* 26, 1884. 1—4.

POLITICAL PHILOSOPHY.

[N.B. *Not more than* nine *questions to be attempted.*]

1. Ὅτι μὲν τοίνυν εἰσὶ φύσει τινὲς οἱ μὲν ἐλεύθεροι, οἱ δὲ δοῦλοι φανερόν· οἷς καὶ συμφέρει τὸ δουλεύειν, καὶ δίκαιόν ἐστι.

ARISTOTLE *Politics*, I. 15.

"We hold these truths to be self-evident—that all men are created equal."

Declaration of Independence.

What arguments would you adduce in support of these statements? Discuss how far it is possible to reconcile them.

2. Explain briefly the necessity for, and the nature of Justinian's legal reforms.

3. "A historical era of aristocracies succeeded a historical era of heroic kings."

MAINE.

Illustrate this proposition from the history of Rome, and of any eastern and any northern race, shewing the importance of the part played by these aristocracies in the development of law.

4. Guizot regards feudalism as a kind of federal government: examine the reasons for so doing, and compare it with other federations, ancient and modern.

5. Examine the causes of the general rise of towns during the twelfth century, and discuss how far it was a revival of Roman institutions.

6. How far, according to Austin's principles, has a subject rights against the sovereign, or the sovereign rights against the subjects? Discuss the bearing of these doctrines on the disputes between James I. and his parliament.

7. Shew why the following laws are not "laws properly so called." (*a*) Lynch Law, (*b*) Canon Law, (*c*) The Laws of Cricket, (*d*) The Laws of Supply and Demand.

8. Indicate the means by which the criminal law has been adapted to the circumstances of successive generations, and illustrate your answer from the history of the Law of Treason.

9. Discuss with historical illustrations the possible influence of public opinion on the government in states where there are neither democratic nor representative institutions.

10. Distinguish, by reference to the works of ancient and modern writers, and compare the advantages of the different methods on which political study may be pursued.

11. What is the meaning of the terms "National Will," and "National Consciousness," as distinguished from the desires and opinions of citizens? Show the importance of these terms with regard to the development and classification of States.

12. Weigh the advantages and disadvantages of different methods of choosing the executive in popular states.

TUESDAY, *May* 27, 1884. 9—12.

HISTORY OF ITALY. A.D. 1250—1494.

1. GIVE some account of the political opinions of Dante, Marsilius of Padua, and Machiavelli, and explain the importance of their works as authorities for the history of the period.

2. Trace the history of the kingdom of the Two Sicilies from A.D. 1250 to 1282. To what was its subsequent importance due?

3. Describe the constitution of Florence at the opening of the 14th century, and note briefly the changes which took place before the time of Cosmo de' Medici.

4. Sketch the growth of the dominion of Venice during this period. To what causes do you ascribe the issue of her struggle with Genoa?

5. With what object was the Council of Pisa summoned? how did the Council deal with the question at issue, and how was it eventually solved?

6. Classify and illustrate the different modes in which despots came to power in Italy in the 14th and 15th centuries. Can you trace any connexion between the origin of their power and the way they used it?

7. Write a life of Æneas Sylvius Piccolomini, *or* of Girolamo Savonarola.

8. Describe the peculiarities of Italian Gothic architecture, and the change that came over it about the year 1450; *or*, sketch the history of the Florentine school of painting during this period.

9. Draw a map of Italy shewing the position of the chief towns, and the more important political divisions immediately before the invasion of Charles VIII.

TUESDAY, *May* 27, 1884. 1—4.

OUTLINES OF ENGLISH HISTORY.

N.B. *Not more than* nine *questions should be attempted.*

1. DESCRIBE the process by which such unity as England possessed before the Norman Conquest was gained; and compare the history of England from this point of view with that of other European countries.

2. What main stages would you distinguish in the history of English monasticism? Illustrate the leading characteristics of each.

3. Give some account of the condition of England in the reign of Stephen, and trace the evils then existing to their general causes.

4. Mention and compare with one another such instances as you remember in the Plantagenet and Lancaster reigns of putting the government of England into commission.

5. Examine the connexion of Wiclif's teaching with the Insurrection of 1381 and the Lollard movement.

6. Describe the political and commercial relations between England and Flanders in the half-century preceding the death of Henry VII.

7. Narrate the progress of the Scottish Reformation down to the death of Knox. What seem to you to be its distinctive features?

8. Discuss the relations between England and Rome under James I. and Charles I.

9. Show in what respects the achievements of Oliver Cromwell's foreign and domestic policy fell short of his avowed purposes.

10. How did the question of the succession to the throne stand in England and in Scotland at the close of the following years: 1680, 1690, 1700, 1710?

11. Describe and trace to its principal causes the condition of Ireland in the earlier half of the 18th century. Explain the force of the expression: 'the English interest.'

12. Write a short history of the frontier of British India during the reign of Her present Majesty.

WEDNESDAY, *May* 28, 1884. 9—12.

ESSAYS.

1. THE status of Labour, in Ancient, Mediaeval and Modern times.
2. The difficulty of managing National Domains.
3. The grounds of obedience to the Law.
4. The possibility of Federation between England and her Colonies.
5. Thucydides and Clarendon.
6. The connexion between the political and literary greatness of a nation.

THURSDAY, *May* 29, 1884. 9—12.

INTERNATIONAL LAW AND SELECTED TREATIES, 1697—1763.

N.B. *Not more than* nine *questions should be attempted.*

1. WHAT effect has the establishment of permanent diplomatic relations between the States of Europe exercised upon international law and policy? Illustrate from the period between 1697 and 1763 the limits placed on the privileges of foreign ministers.

2. Define neutrality. What is meant by permanent neutrality, and is this recognised by international law? Discuss the relations between the so-called right of asylum and the duties of neutrals.

3. What conditions are necessary to make cessions of territory internationally valid? What do you mean by a *de facto* government?

4. Explain the terms *jus postliminii; jus avocandi; droit d'aubaine.* Illustrate the maxim: 'Ut mores gentium mutantur, et mutatur jus gentium.'

5. 'D'après un usage barbare, dont le cabinet de Londres s'est plus d'une fois rendu capable, l'admiral Boscawen attaqua 18 juin 1755, sans qu'il y eût eu déclaration de guerre,.....deux vaisseaux de guerre français.'

(*a*) Is this charge against the British government borne out by facts?

(*b*) What has been the ordinary usage of European nations and of the United States in the last and present centuries as to declaration or warning before beginning hostilities?

6. Recite, with their dates and a mention of the wars terminated by them, the great European treaties which were confirmed by the Peace of Paris in 1763. What important commercial treaties were concluded in the earlier half of the 18th century?

7. State precisely the successive stages in the formation of the Grand Alliance. What were the actual treaty engagements of its several members towards one another when peace negotiations began in 1711?

8. To what extent were religious interests involved, and taken note of, in the War of the Spanish Succession? Can you cite any instances of regard being paid to religious rights in treaties concluded between 1697 and 1763?

9. Russia has been said to have entered into the family of European nations in 1717. Criticise the statement and its phraseology. Was any progress made by the foreign policy of Russia in the ten years ensuing?

10. What were the objects of the Pragmatic Sanction of Charles VI., and of the *Pacte de famille* of 1761? Mention any historical analogies to these instruments; and write a brief history of the Pragmatic Sanction up to the outbreak of the First Silesian War.

11. Under what circumstances did the War of the Polish Succession break out, and by what arrangements was it brought to a conclusion? Discuss the censures which have been passed on these arrangements.

12. Trace in the history of treaties the successive aspects of British foreign policy between the Peace of Aix-la-Chapelle and the outbreak of the Seven Years' War, and in Russian between the latter event and the Peace of Hubertusburg.

THURSDAY, *May* 29, 1884. 1—4.

POLITICAL ECONOMY AND ECONOMIC HISTORY.

N.B. *Nine questions only are to be answered.*

1. WHAT is meant by calling Political Economy a science? Give instances of assumptions which it is necessary to make in order to treat it as such.

2. Prove that the lower the rate of interest the more profitable it will be to substitute machine for hand labour.

3. "There cannot be over-production of commodities in general." Explain this statement and examine in connexion with it the nature of a commercial crisis.

4. Examine the effect upon profits, wages and rents of the following cases:

(1) Half the population of a country leaves it.

(2) The population is suddenly doubled.

(3) Population remains the same, but the power of food production is suddenly doubled.

5. What are the causes which affect the value of a bill on New York in London?

6. Free trade is attacked (1) on economic grounds, (2) on grounds of public policy. State, distinguish, and discuss the various arguments brought against it.

7. Compare Greek and English methods of colonization, and discuss the best way of settling a new colony on unoccupied territory, with a view to economic progress.

8. On what evidence is it maintained that tillage in England decayed in the 15th and 16th centuries? Account for the fact (if you find it to be one) and examine the effect on the rural social organization.

9. State the most important provisions of the Statute of Apprentices (5 Eliz. c. 4). Under what circumstances was it passed and under what circumstances and with what results repealed? Compare Elizabethan and modern legislation with respect to industrial relations.

10. Examine the effect of social changes upon the opinions at different times received as to the morality of lending money at interest. Give an account of English legislation on this subject.

11. Explain the *bullionist* and *mercantile* theories. Examine the political conceptions on which these theories rested, and show their connexion with English commercial and colonial policy in the 17th and 18th centuries.

12. Examine the economic effects of War in general, and verify your conclusions by special reference to the economic effects of the wars of 1793—1815 on England and France respectively.

FRIDAY, *May* 30, 1884. 9—12.

ENGLISH HISTORY, 1603—1660.

1. EXPLAIN and discuss the policy of James with regard to the war in the Palatinate.

2. Write a brief history of Episcopacy in Scotland from the Union of the Crowns to the Restoration.

3. Give an account of the events which led up to the trial of John Hampden, and discuss the fairness of the judges' decision.

4. Discuss the constitutional character of the measures passed by the Long Parliament before and after September, 1641.

5. Show the weakness of the parliamentarians at the period of the Civil War when their fortunes were at the lowest point, and note the steps in their recovery.

6. Examine the value of the evidence alleged of violent outrages perpetrated in Ireland by the rebels of 1641, and by Cromwell's soldiers respectively.

7. Trace clearly the causes of the quarrel which culminated in the war between the Commonwealth and the Dutch.

8. Trace the rise and decline of Presbyterianism in England.

9. Discuss the importance and accuracy of the following authorities: Baillie's *Letters*, Clarendon's *History*, Rushworth's *Collections* and Whitelock's *Memorials*.

FRIDAY, *May* 30, 1884. 1—4.

CONSTITUTIONAL LAW AND HISTORY.

N.B. *Not more than* nine *questions are to be attempted, at least two of which must be taken from the last three.*

1. To what extent were the essential characteristics of feudalism apparent in England before the Norman Conquest?

2. Translate and comment on the following extract from the Dialogus de Scaccario—"Hida a primitiva institutione ex centum acris constat: hundredus vero ex hidarum aliquot centenariis, sed non determinatis: comitatus autem eadem lege ex hundredis constant, hoc est quidam ex pluribus quidam ex paucioribus, secundum quod divisa est terra per viros discretos. Comes autem est qui tertiam portionem eorum quæ de placitis proveniunt in quolibet comitatu percipit. Summa namque illa quæ nomine firmæ requiritur a vicecomite tota non exsurgit ex fundorum redditibus sed ex magna parte de placitis provenit, et horum tertiam partem comes percipit, qui ideo sic dici dicitur quia fisco socius est et comes in percipiendis. Porro vicecomes dicitur quia vicem comitis suppleat in placitis illis quibus comes ex suæ dignitatis ratione participat." (*Select Charters*, p. 200.)

3. Translate and explain the following clauses of Magna Carta:

§ 1. "In primis concessisse Deo et hac præsenti carta nostra confirmasse, pro nobis et hæredibus nostris in perpetuum, quod Anglicana ecclesia libera sit, et habeat jura sua integra, et libertates suas illæsas."

§ 17. "Communia placita non sequantur curiam nostram, sed teneantur in aliquo loco certo."

§ 23. "Nec villa nec homo distringatur facere pontes ad riparias, nisi qui ab antiquo et de jure facere debent."

§ 44. "Homines qui manent extra forestam non veniant de cetero coram justiciariis nostris de foresta per communes summonitiones, nisi sint in placito vel pleggii alicujus vel aliquorum qui attachiati sint pro foresta."

4. Criticise the acts and policy of the Lords Ordainers, and compare their revolt with the baronial movements of 1258 and 1297.

5. Account for the disorganisation of government in the middle of the 15th century.

6. State and examine Hallam's conclusions with regard to the Star-Chamber in the time of the Tudor sovereigns, and discuss its connexion with the Council.

7. Hallam (*Const. Hist.* I. 261) says, with regard to the question of monopolies in 1601, "The crown either possessed or assumed the prerogative of regulating almost all matters of commerce at its discretion." Discuss the historical basis of this claim.

8. Compare the measures taken in England and in Scotland to carry out the change of government in 1688—'89, and the statements of principle therein made or implied.

9. What methods were adopted in the reign of George III. to obviate the difficulties caused by the King's illnesses? In what way did the question of a regency raise in subsequent reigns, and how was it settled?

10. Trace the origin of the Parliament of Paris and of the States General in France, and explain the difference of their fate under the absolute monarchy.

11. The Revolution at Athens in 411 B.C. is compared by Herr von Ranke (*Weltgeschichte* I. 354) with those of the Italian Republics in the 14th and 15th centuries. Illustrate this comparison.

12. What political arrangements existed in the English Colonies in North America, prior to the War of Independence, and what was their political connexion with this country?

WHEWELL SCHOLARSHIPS.

SATURDAY, *May* 31, 1884.

INTERNATIONAL LAW.

1. DISCUSS the following statement:—"When a nation finds a country uninhabited and without an owner it may lawfully take possession of it, and after it has sufficiently made known its will in this respect it cannot be deprived of it by another nation." Would you modify these propositions in any way, if the country was inhabited by savages?

2. State what you know of the *Mare Clausum* and *Mare Apertum* controversy. Has a state a right to close its navigable rivers to commerce?

3. Enumerate the classes of persons who are exempt from the jurisdiction usually exercised by a state over foreigners within its territory, and give the limitations, if any, to the exemptions in question.

4. Into what classes are diplomatic agents divided, and what are the rules with regard to their rank and precedence? Give an account of the case of Count Gyllenborg, and discuss whether the action of the British Government with regard to him was a breach of International Law.

5. Write a brief historical account of *either* the Silesian Loan controversy, *or* the Holy Alliance.

6. State briefly and generally what classes of cases are dealt with respectively by reference to the following laws:—*Lex fori, lex domicilii, lex loci rei sitæ, lex loci contractûs.*

7. Examine into the nature and limits of the *Right of Search.* Is it defeated by the presence of convoy?

8. Enumerate the instruments and practices of warfare which are forbidden by modern International Law, and set forth clearly the principles on which the prohibitions are founded. Distinguish between allowable and non-allowable stratagems.

9. What is the exact position of (*a*) neutralized states, (*b*) neutralized persons, (*c*) neutralized things? Can neutralization be effected by declaration on the part of one state, or by treaty between two or more states?

10. Write *either* a brief digest of the law of blockade as administered by British Prize Courts, *or* a short history of the rule *Free ships, free goods.*

SATURDAY, *May* 31, 1884.

INTERNATIONAL LAW.

[*Full marks may be obtained by answering completely any* five *of these questions.*]

1. DISCUSS the proposition that a complete definition of law presupposes a definition of sovereignty. If you hold that it does, how do you justify the use of the term *International Law*?

2. Examine the following statements:—

(*a*) "We shall be found in our place when actual danger menaces the system of Europe; but this country cannot and will not act upon abstract and speculative principles of precaution." LORD CASTLEREAGH.

(*b*) "Would it be agreeable to England that the United States should make a treaty with some foreign power, excluding the principle of hereditary nobility, and then turn to the British government, and ask them to recognise it, and guarantee its execution?" GENERAL CASS.

(*c*) "Interference in foreign countries should be rare, deliberate, decisive in character, and effectual for its end." MR GLADSTONE.

3. Give a statement of *The Monroe Doctrine*, and discuss whether it is justly applicable to the project of neutralizing the Panama Canal.

4. Compare the rules laid down by Grotius and the Brussels Conference of 1874 with regard to the treatment of prisoners of war. Trace the changes in practice during the interval between them.

5. How would you define *Occupied Territory*? Examine the doctrine of constructive occupation; and explain fully the changes in the position of the inhabitants of a district and their property brought about by belligerent occupation.

6. Deal with the following cases:

(*a*) A British vessel is wrecked on the coast of a Colonial possession of a foreign country, and its crew are made prisoners by a barbarous tribe who are practically free from the authority of the Colonial government, though they live within its territory. If all ordinary means of rescue fail, has Great Britain the right to demand that the foreign state shall either free them by force itself, or allow her to do so?

(*b*) A French merchant resident in England has a share as sleeping partner in the business of a Spanish firm. In a war between England and Spain a vessel belonging to the firm is captured by an English cruiser. The merchant demands in the English Prize Court the restoration of his share of the captured property on the ground that he cannot be considered to be an enemy. What would be the judgment of the court? Would it be altered, if just before the war the merchant had left England in order to live in France?

7. Arrange the duties of a neutral state in time of war under the two heads of those which are certain and those which are doubtful. Point out with regard to each of the latter class (*a*) what you hold to be the best solution of the doubt, (*b*) what, judging from existing tendencies, is likely to be the actual solution.

8. What is meant by *The Eastern Question*? Trace its history from 1850 to the present time. How is it affected by the doctrine of nationality?

MONDAY, *June* 2, 1884. 9—12 A.M.

MORAL AND POLITICAL PHILOSOPHY.

I. IT has been said that current moral maxims are frequently empty tautologies; and that in particular this is the case with the maxim 'that each man is to have his own.' Discuss this statement; and consider how far any more significant principles can be laid down for determining moral duty in the department of Justice.

II. How was the relation of Politics to Ethics conceived by Plato or Aristotle? Compare the manner in which the same relation is conceived by any modern school of Philosophy.

III. Examine any theories that have been put forward as to the origin of moral ideas or sentiments: and consider what light is thrown upon such theories by the knowledge we possess of the actual development of modern European morality.

IV. Compare the conditions under which contracts should be legally enforced with the conditions under which promises are morally binding; discussing in particular the case of promises extorted by "force" or "undue influence."

1. COMPARE the different classes of authorities appealed to by Suarez, Hobbes, and Grotius, in support of their respective views on law in general. Shew the consequent difference of those views themselves, in respect of their practical utility.

2. Explain the particular force of the various expressions *ἐν τάξει*, *voluntarium* and *positivum* as applied to the branch of law which has been opposed to "natural." Shew how the last of these expressions came to bear the meaning given it by Austin.

3. Diximus summum imperium tenentibus resisti jure non posse. Nunc quaedam sunt quae lectorem monere debemus, ne putet in hanc legem delinquere eos qui revera non delinquunt.

State some of the exceptional cases which Grotius proceeds to enumerate, particularly any instances which have actually occurred in modern times.

4. Translate:—

Ad hoc exemplum videtur et mare occupari potuisse ab eo, qui terras ad latus utrumque possideat, etiamsi aut supra pateat ut sinus, aut supra et infra ut fretum, dummodo non ita magna fit pars maris, ut non cum terris comparata portio earum videri possit. Et quod uni populo aut regi licet, idem licere videtur et duobus aut tribus, si pariter mare intersitum occupare voluerint.

Sed multa, quae natura permittit, jus gentium ex communi quodam consensu potuit prohibere. Quare quibus in locis tale jus gentium viguit, neque communi

consensu sublatum est, maris portio quamvis exigua, et maxima sui parte inclusa littoribus, in jus proprium populi alicujus non concedet.

Illustrate by historical instances the application of the principles involved in these passages.

5. Compare the doctrine of Grotius with that of present authorities on the following points:—

(*a*) "Intervention."

(*b*) Neutral furnishing supplies to enemy.

(*c*) "Enemy ship, enemy goods."

(*d*) Privateering.

MONDAY, *June* 2, 1884. 1—4.

WRITE an English Essay on one of the following subjects:

1. Recent annexations of territory by Russia in Central Asia.

2. The Rupture of the Peace of Amiens.

3. The influence of the Church during the Middle Ages on international questions.

4. The foreign policy of Oliver Cromwell.

5. The law of political decay, (1) in Ancient, (2) in Modern States.

6. The condition of Egypt under the Romans compared with its present state.

7. The relation of Politics to Ethics according to (1) ancient, (2) modern theories.

SPECIAL EXAMINATION IN THEOLOGY FOR THE ORDINARY B.A. DEGREE.

FRIDAY, *May* 30, 1884. 9—12.

THE EPISTLE TO THE ROMANS.

1. WHAT light does this Epistle throw on the character of the Church in Rome? What evidence on this point may be gained from other parts of the New Testament? Account for the fact that St. Paul wrote to this Church in Greek.

2. What is St. Paul's teaching in this Epistle as to (1) the destiny of creation and (2) its witness to God? Compare that of other passages in the New Testament.

3. Translate, with short notes on the words and phrases between asterisks only:

(*a*) *οὐ γάρ ἐστιν διαστολή. πάντες γὰρ *ἥμαρτον καὶ ὑστεροῦνται* τῆς δόξης τοῦ θεοῦ, δικαιούμενοι δωρεὰν τῇ αὐτοῦ χάριτι διὰ τῆς ἀπολυτρώσεως τῆς ἐν Χριστῷ Ἰησοῦ· ὃν προέθετο ὁ θεὸς *ἱλαστήριον* διὰ πίστεως ἐν τῷ αὐτοῦ αἵματι εἰς ἔνδειξιν τῆς δικαιοσύνης αὐτοῦ διὰ τὴν *πάρεσιν* τῶν προγεγονότων ἁμαρτημάτων ἐν τῇ ἀνοχῇ τοῦ θεοῦ, πρὸς τὴν ἔνδειξιν τῆς δικαιοσύνης αὐτοῦ ἐν τῷ νῦν καιρῷ, εἰς τὸ εἶναι αὐτὸν *δίκαιον καὶ δικαιοῦντα* τὸν ἐκ πίστεως Ἰησοῦ.*

(*b*) *εἴ γε Χριστὸς ὄντων ἡμῶν ἀσθενῶν ἔτι κατὰ καιρὸν ὑπὲρ ἀσεβῶν ἀπέθανεν. μόλις γὰρ ὑπὲρ δικαίου τις ἀποθανεῖται· ὑπὲρ γὰρ τοῦ ἀγαθοῦ τάχα τις καὶ τολμᾷ ἀποθανεῖν· συνίστησιν δὲ τὴν ἑαυτοῦ ἀγάπην εἰς ἡμᾶς ὁ θεὸς ὅτι ἔτι ἁμαρτωλῶν ὄντων ἡμῶν Χριστὸς ὑπὲρ ἡμῶν ἀπέθανεν.*

Briefly paraphrase, so as to bring out the argument.

(*c*) *ὥστε, ἀδελφοί μου, καὶ ὑμεῖς ἐθανατώθητε τῷ νόμῳ διὰ τοῦ σώματος τοῦ χριστοῦ, εἰς τὸ γενέσθαι ὑμᾶς ἑτέρῳ, τῷ ἐκ νεκρῶν ἐγερθέντι ἵνα καρποφορήσωμεν τῷ θεῷ. ὅτε γὰρ ἦμεν ἐν τῇ σαρκί, τὰ παθήματα τῶν ἁμαρτιῶν τὰ διὰ τοῦ νόμου ἐνηργεῖτο ἐν τοῖς μέλεσιν ἡμῶν εἰς τὸ καρποφορῆσαι τῷ θανάτῳ· νυνὶ δὲ *κατηργήθημεν ἀπὸ τοῦ νόμου*, ἀποθανόντες ἐν ᾧ κατειχόμεθα, ὥστε δουλεύειν ἡμᾶς ἐν καινότητι πνεύματος καὶ οὐ παλαιότητι γράμματος.*

Give the previous context and point out any inversion of the argument.

(*d*) *παρακαλῶ οὖν ὑμᾶς, ἀδελφοί, διὰ τῶν οἰκτιρμῶν τοῦ θεοῦ παραστῆσαι τὰ σώματα ὑμῶν θυσίαν ζῶσαν ἁγίαν τῷ θεῷ εὐάρεστον, *τὴν λογικὴν λατρείαν ὑμῶν·* καὶ μὴ *συνσχηματίζεσθε τῷ αἰῶνι τούτῳ, ἀλλὰ μεταμορφοῦσθε* τῇ ἀνακαινώσει τοῦ νοός, εἰς τὸ δοκιμάζειν ὑμᾶς τί τὸ θέλημα τοῦ θεοῦ, τὸ ἀγαθὸν καὶ εὐάρεστον καὶ τέλειον.*

(*e*) *τολμηροτέρως δὲ *ἔγραψα* ὑμῖν ἀπὸ μέρους, ὡς ἐπαναμιμνήσκων ὑμᾶς· διὰ τὴν χάριν τὴν δοθεῖσάν μοι ἀπὸ τοῦ θεοῦ εἰς τὸ εἶναί με λειτουργὸν Χριστοῦ Ἰησοῦ εἰς τὰ ἔθνη, *ἱερουργοῦντα* τὸ εὐαγγέλιον τοῦ θεοῦ, ἵνα γένηται ἡ προσφορὰ τῶν ἐθνῶν εὐπρόσδεκτος, ἡγιασμένη ἐν πνεύματι ἁγίῳ. ἔχω οὖν τὴν*

καύχησιν ἐν Χριστῷ Ἰησοῦ τὰ πρὸς τὸν θεόν· οὐ γὰρ τολμήσω τι λαλεῖν ὧν οὐ κατειργάσατο Χριστὸς δι' ἐμοῦ εἰς ὑπακοὴν ἐθνῶν, λόγῳ καὶ ἔργῳ, ἐν δυνάμει σημείων καὶ τεράτων, ἐν δυνάμει πνεύματος ἁγίου· ὥστε με ἀπὸ Ἱερουσαλὴμ καὶ κύκλῳ μέχρι τοῦ Ἰλλυρικοῦ πεπληρωκέναι τὸ εὐαγγέλιον τοῦ χριστοῦ, οὕτως δὲ *φιλοτιμούμενον* εὐαγγελίζεσθαι οὐχ ὅπου ὠνομάσθη Χριστός, ἵνα μὴ ἐπ' ἀλλότριον θεμέλιον οἰκοδομῶ.

4. Translate and explain:

(a) τοῦ γενομένου ἐκ σπέρματος Δαυεὶδ κατὰ σάρκα, τοῦ ὁρισθέντος υἱοῦ θεοῦ ἐν δυνάμει κατὰ πνεῦμα ἁγιωσύνης ἐξ ἀναστάσεως νεκρῶν.

(b) ὁ βδελυσσόμενος τὰ εἴδωλα ἱεροσυλεῖς;

(c) νόμος δὲ παρεισῆλθεν ἵνα πλεονάσῃ τὸ παράπτωμα.

(d) εἰ γὰρ σύμφυτοι γεγόναμεν τῷ ὁμοιώματι τοῦ θανάτου αὐτοῦ, ἀλλὰ καὶ τῆς ἀναστάσεως ἐσόμεθα.

(e) ηὐχόμην γὰρ ἀνάθεμα εἶναι αὐτὸς ἐγὼ ἀπὸ τοῦ χριστοῦ ὑπὲρ τῶν ἀδελφῶν μου.

Explain the force of the Imperfect here.

(f) μὴ ἑαυτοὺς ἐκδικοῦντες, ἀγαπητοί, ἀλλὰ δότε τόπον τῇ ὀργῇ.

5. Give the original context of the following quotations from the Old Testament and explain carefully St. Paul's use of them.

(a) ὁ δὲ δίκαιος ἐκ πίστεως ζήσεται.

(b) ὅπως ἂν δικαιωθῇς ἐν τοῖς λόγοις σου καὶ νικήσεις ἐν τῷ κρίνεσθαί σε.

(c) τὸν Ἰακὼβ ἠγάπησα, τὸν δὲ Ἠσαῦ ἐμίσησα.

(d) καλέσω τὸν οὐ λαόν μου λαόν μου.

6. Give St. Paul's answer to the question, μὴ ἀπώσατο ὁ θεὸς τὸν λαὸν αὐτοῦ;

7. What are the different classes of evidence available when there is a variation of reading? Estimate their comparative value.

In the following quotations from the Textus Receptus, point out important variations of reading. How is the meaning of the words affected in each case?

(a) μὴ ἀσθενήσας τῇ πίστει, οὐ κατενόησε τὸ ἑαυτοῦ σῶμα ἤδη νενεκρωμένον.

(b) δικαιωθέντες οὖν ἐκ πίστεως, εἰρήνην ἔχομεν πρὸς τὸν Θεόν.

(c) οἴδαμεν δὲ ὅτι τοῖς ἀγαπῶσι τὸν θεὸν πάντα συνεργεῖ εἰς ἀγαθόν.

8. Discuss the following words and phrases:

ἀποκαραδοκία, ἀσέλγεια, ἀφορμή, καταλλάσσειν, ὀψώνια, περὶ ἁμαρτίας, πνεῦμα κατανύξεως.

9. Retranslate into the original Greek:

(a) Even as they refused to have God in their knowledge, God gave them up unto a reprobate mind.

(b) For I reckon that the sufferings of this present time are not worthy to be compared with the glory which shall be revealed to us-ward.

(c) For I say...to every man that is among you, not to think of himself more highly than he ought to think; but so to think as to think soberly according as God hath dealt to each man a measure of faith.

FRIDAY, *May* 30, 1884. 1—4.

(A). SAMUEL I., II.

1. ACCOUNT for the title, "The Books of Samuel." What other names have been given to these Books? What inference may be drawn from internal evidence as to the date at which they received substantially their present form?

2. Shew from the history of Samuel and of his times that "he was specially ordained to bind together the broken links of two converging epochs."

3. What may we learn from the Books of Samuel as to the religious, the civil and the military organization of David's kingdom?

4. Give reasons for supposing that Bathsheba and Ahithophel were nearly related. In what other instances may an argument for the historical accuracy of these Books be drawn from coincidences apparently undesigned?

5. Describe the position of the following places, briefly mentioning their connexion with events recorded in these Books:

Gilgal, Michmash, Ephes-dammim, Nob, Endor, Gilboa, Rabbah.

6. Give the meaning and origin of the following names:

Ichabod, Ebenezer, Sela-hammahlekoth, Helkath-hazzurim, Baal-perazim, Perez-uzzah, Jedidiah.

7. Comment upon the following passages, giving the context in each case:

(*a*) Wherefore they say 'Is Saul also among the prophets?'

(*b*) The Lord sent Jerubbaal and Bedan and Jephthah and Samuel, and delivered you out of the hand of your enemies.

(*c*) He bade them teach the children of Judah the use of the bow: behold it is written in the book of Jasher.

(*d*) Except thou take away the blind and the lame thou shalt not come in hither.

(*e*) I am this day weak though anointed king, and these men, the sons of Zeruiah, be too hard for me.

(*f*) Is not this the blood of men that went in jeopardy of their lives?

(B). PSALMS I—XLI.

1. ACCOUNT for the variations between the Prayer-book Version of the Psalms and the Authorized Version. Illustrate your answer by quoting passages from the First Book of the Psalms in which these Versions differ characteristically.

2. Point out indications in these Psalms (1) of aspirations after a future life, (2) of a preference for spiritual over ceremonial worship.

3. What passages in this Book are quoted in the New Testament? State in each case the context in which the quotation occurs.

4. It has been said that "David comprised the 613 commands of the Law given on Sinai in eleven." Justify this statement.

5. What Psalms in this Book are appointed as Proper Psalms for Fasts or Festivals? Shew by quotations the reasons for their selection.

6. Explain Shiggaion, Maschil, Michtam, Selah, Upon Muth-labben, Upon Aijeleth Shahar.

7. Comment upon the following passages, correcting the rendering, where necessary:

(*a*) Kiss the Son lest he be angry, and ye perish from the way.

(*b*) The wicked through the pride of his countenance will not seek after God: God is not in all his thoughts.

(*c*) The transgression of the wicked saith within my heart, that there is no fear of God before his eyes.

(*d*) Mark the perfect man and behold the upright: for the end of that man is peace.

(*e*) Mine ears hast thou opened.

Account for the form in which this last passage is quoted in the Epistle to the Hebrews.

SATURDAY, *May* 31, 1884. 9—12.

[*Answers to the Outlines and the Selected Period are to be sent up separately. Candidates are required to satisfy the Examiners in both subjects.*]

(A.) OUTLINES OF ENGLISH CHURCH HISTORY

[*Not more than* THREE *questions in each of the divisions I. II III. of* (A) *are to be attempted.*]

I.

1. GIVE a brief account of the planting of the Anglo-Saxon Church throughout England, distinguishing clearly the different centres of Evangelization.

2. Trace the relations which existed between the see of Rome and the Anglo-Saxon Church.

3. Give some account of the Controversy between the Secular and the Regular Clergy.

4. What were the main provisions of the Constitutions of Clarendon? Give a clear account of the controversy with which they are connected.

5. Give a short account of, Chad—Bede—Theodore—The Council of Hertford—The Councils of Clovesho.

II.

1. Give an account of Bishop Grosseteste, illustrating from his life and work (1) the relations of the English Church to the Pope, and (2) its condition in regard to discipline.

2. What light does contemporary English literature throw on the feelings of the laity towards the Church in the time of Wycliffe? How far do you consider that his work had a permanent influence?

3. Give a brief account of the "Revival of learning" and of the leaders of the movement in England.

4. Write a brief sketch of the Reformation in Henry the Eighth's reign, bringing out clearly its different elements, and shewing how far its course was influenced by the characters of the king's advisers.

5. Explain the following:—Annates—Legatus a latere—The Primers—The Statutes, *Circumspecte agatis, Praemunire.*

III.

1. Give some account of the work of Tyndale and Coverdale: in what way and through what channels has their influence affected the Authorised Version?

2. What was the attitude of the successive Archbishops of Canterbury in Elizabeth's reign towards Puritanism? How did the character of this controversy alter during this reign? What change passed over the relations of the English Roman Catholics to the Church of England?

3. Analyse the causes which led to the repudiation of episcopacy by the English Parliament in the seventeenth century.

4. Give some account of the controversy with the Deists in the Eighteenth Century. What standard theological works did it call forth?

5. Give some account of—*The Laws of Ecclesiastical Polity*—*Appello Cæsarem*—Cosin's *Devotions*—*Defensio Fidei Nicaenae*—Law's *Serious Call.*

(B.) THE LIFE AND TIMES OF LANFRANC AND ANSELM.

1. Describe briefly the work and discipline of Monastic Institutions at this period; and account for their prominence in the life of the time.

2. What was the Controversy with Berengarius? What part did Lanfranc take in it?

3. Sketch briefly Lanfranc's career as Archbishop, and his policy towards the Anglo-Saxons, the English Bishops, and the Pope.

4. Give an account of the Investiture Controversy. How was it raised and disposed of in England at this time?

5. Trace the steps which led to Anselm's temporary reconciliation with William II. How was the final rupture between them brought about?

6. Estimate Anselm's power as a reasoner, illustrating your remarks from his works.

7. Write a note on Herluin—Odo, Bishop of Bayeux—Ralph Flambard—Orderic—Anselm's action at the Council of Bari, and at the Court held at Winchester.

SATURDAY, *May* 31, 1884. 1—4.

THE GOSPEL ACCORDING TO ST MARK.

1. WHAT do you consider to have been the special object of St Mark in writing his Gospel? How far is this object explained by the circumstances under which it was written?

2. Give a short estimate of the general critical value of the "Textus Receptus." State briefly the main arguments for and against the genuineness of the last twelve verses of St Mark's Gospel.

3. What special details are brought out by St Mark in his account of the Baptism and Temptation of our Lord?

4. Mention the occasions recorded in this Gospel on which our Lord predicted His Passion, noticing any difference of detail in the several predictions.

5. Translate the following passages, commenting on the words and phrases between asterisks only:

(*a*) *καὶ οἱ Φαρισαῖοι ἔλεγον αὐτῷ Ἴδε τί ποιοῦσιν τοῖς σάββασιν ὃ οὐκ ἔξεστιν; καὶ λέγει αὐτοῖς Οὐδέποτε ἀνέγνωτε τί ἐποίησεν Δαυεὶδ ὅτε χρείαν ἔσχεν καὶ ἐπείνασεν αὐτὸς καὶ οἱ μετ' αὐτοῦ; πῶς εἰσῆλθεν εἰς τὸν οἶκον τοῦ θεοῦ *ἐπὶ Ἀβιάθαρ ἀρχιερέως* καὶ *τοὺς ἄρτους τῆς προθέσεως* ἔφαγεν, οὓς οὐκ ἔξεστιν φαγεῖν εἰ μὴ τοὺς ἱερεῖς, καὶ ἔδωκεν καὶ τοῖς σὺν αὐτῷ οὖσιν; καὶ ἔλεγεν αὐτοῖς Τὸ σάββατον διὰ τὸν ἄνθρωπον ἐγένετο καὶ οὐχ ὁ ἄνθρωπος διὰ τὸ σάββατον· ὥστε κύριός ἐστιν *ὁ υἱὸς τοῦ ἀνθρώπου* καὶ τοῦ σαββάτου.*

What was the exact point of the Pharisees' accusation? Shew the relevancy of the event in the Old Testament history here referred to.

(*b*) *καὶ *ἀποταξάμενος* αὐτοῖς ἀπῆλθεν εἰς τὸ ὄρος προσεύξασθαι. καὶ ὀψίας γενομένης ἦν τὸ πλοῖον ἐν μέσῳ τῆς θαλάσσης, καὶ αὐτὸς μόνος ἐπὶ τῆς γῆς. καὶ ἰδὼν αὐτοὺς βασανιζομένους ἐν τῷ ἐλαύνειν, ἦν γὰρ ὁ ἄνεμος ἐναντίος αὐτοῖς, περὶ *τετάρτην φυλακὴν* τῆς νυκτὸς ἔρχεται πρὸς αὐτοὺς περιπατῶν ἐπὶ τῆς θαλάσσης· καὶ ἤθελεν παρελθεῖν αὐτούς. οἱ δὲ ἰδόντες αὐτὸν ἐπὶ τῆς θαλάσσης περιπατοῦντα ἔδοξαν ὅτι φάντασμά ἐστιν καὶ ἀνέκραξαν.*

What other particulars does St Matthew relate in connexion with this incident?

(*c*) *καὶ συνάγονται πρὸς αὐτὸν οἱ Φαρισαῖοι καί τινες τῶν γραμματέων ἐλθόντες ἀπὸ Ἱεροσολύμων καὶ ἰδόντες τινὰς τῶν μαθητῶν αὐτοῦ ὅτι κοιναῖς χερσίν, τοῦτ' ἔστιν ἀνίπτοις, ἐσθίουσιν τοὺς ἄρτους.—οἱ γὰρ Φαρισαῖοι καὶ πάντες οἱ Ἰουδαῖοι ἐὰν μὴ *πυγμῇ* νίψωνται τὰς χεῖρας οὐκ ἐσθίουσιν, κρατοῦντες *τὴν παράδοσιν τῶν πρεσβυτέρων*, καὶ ἀπ' ἀγορᾶς ἐὰν μὴ *ῥαντίσωνται* οὐκ ἐσθίουσιν, καὶ ἄλλα πολλά ἐστιν ἃ παρέλαβον κρατεῖν, βαπτισμοὺς ποτηρίων καὶ *ξεστῶν* καὶ χαλκίων.*

(*d*) *οἱ δὲ μαθηταὶ ἐθαμβοῦντο ἐπὶ τοῖς λόγοις αὐτοῦ. ὁ δὲ Ἰησοῦς πάλιν ἀποκριθεὶς λέγει αὐτοῖς Τέκνα, πῶς δύσκολόν ἐστιν εἰς τὴν βασιλείαν τοῦ θεοῦ εἰσελθεῖν· εὐκοπώτερόν ἐστιν *κάμηλον διὰ τρυμαλιᾶς ῥαφίδος διελθεῖν* ἢ πλούσιον εἰς τὴν βασιλείαν τοῦ θεοῦ εἰσελθεῖν. οἱ δὲ περισσῶς ἐξεπλήσσοντο λέγοντες πρὸς αὐτόν Καὶ τίς δύναται σωθῆναι; *ἐμβλέψας* αὐτοῖς ὁ Ἰησοῦς λέγει Παρὰ ἀνθρώποις ἀδύνατον ἀλλ' οὐ παρὰ θεῷ, πάντα γὰρ δυνατὰ παρὰ τῷ θεῷ.*

(*e*) ὁ δὲ ἀρχιερεὺς διαρήξας τοὺς * χιτῶνας * αὐτοῦ λέγει Τί ἔτι χρείαν ἔχομεν μαρτύρων; ἠκούσατε τῆς * βλασφημίας *; τί ὑμῖν φαίνεται; οἱ δὲ πάντες κατέκριναν αὐτὸν ἔνοχον εἶναι θανάτου. Καὶ ἤρξαντό τινες ἐμπτύειν αὐτῷ καὶ περικαλύπτειν αὐτοῦ τὸ πρόσωπον καὶ * κολαφίζειν * αὐτὸν καὶ λέγειν αὐτῷ Προφήτευσον, καὶ οἱ ὑπηρέται * ῥαπίσμασιν αὐτὸν ἔλαβον *.

(*f*) καὶ * ἀγγαρεύουσιν * παράγοντά τινα Σίμωνα Κυρηναῖον ἐρχόμενον ἀπ' ἀγροῦ, τὸν πατέρα Ἀλεξάνδρου καὶ Ῥούφου, ἵνα ἄρῃ τὸν σταυρὸν αὐτοῦ. καὶ φέρουσιν αὐτὸν ἐπὶ τὸν Γολγοθὰν τόπον, ὅ ἐστιν μεθερμηνευόμενος Κρανίου Τόπος. καὶ ἐδίδουν αὐτῷ * ἐσμυρνισμένον οἶνον *, ὃς δὲ οὐκ ἔλαβεν. καὶ σταυροῦσιν αὐτὸν καὶ διαμερίζονται τὰ ἱμάτια αὐτοῦ, βάλλοντες κλῆρον ἐπ' αὐτὰ τίς τί ἄρῃ.

6. Without translating, explain the following passages:

(*a*) ὃς γὰρ ἔχει, δοθήσεται αὐτῷ· καὶ ὃς οὐκ ἔχει, καὶ ὃ ἔχει ἀρθήσεται ἀπ' αὐτοῦ.

(*b*) καὶ διεστέλλετο αὐτοῖς λέγων Ὁρᾶτε, βλέπετε ἀπὸ τῆς ζύμης τῶν Φαρισαίων καὶ τῆς ζύμης Ἡρῴδου.

(*c*) δοῦναι τὴν ψυχὴν αὐτοῦ λύτρον ἀντὶ πολλῶν.

(*d*) καὶ ἐν τῇ διδαχῇ αὐτοῦ ἔλεγεν Βλέπετε ἀπὸ τῶν γραμματέων τῶν θελόντων ἐν στολαῖς περιπατεῖν καὶ ἀσπασμοὺς ἐν ταῖς ἀγοραῖς καὶ πρωτοκαθεδρίας ἐν ταῖς συναγωγαῖς καὶ πρωτοκλισίας ἐν τοῖς δείπνοις.

(*e*) καὶ ἤδη ὀψίας γενομένης, ἐπεὶ ἦν παρασκευή, ὅ ἐστιν προσάββατον.

7. Translate and comment upon the following passages, giving the substance of the context in each case:

(*a*) καὶ ἔλεγεν αὐτοῖς Ἀμὴν λέγω ὑμῖν ὅτι εἰσίν τινες ὧδε τῶν ἑστηκότων οἵτινες οὐ μὴ γεύσωνται θανάτου ἕως ἂν ἴδωσιν τὴν βασιλείαν τοῦ θεοῦ ἐληλυθυῖαν ἐν δυνάμει.

(*b*) διὰ τοῦτο λέγω ὑμῖν, πάντα ὅσα προσεύχεσθε καὶ αἰτεῖσθε, πιστεύετε ὅτι ἐλάβετε, καὶ ἔσται ὑμῖν.

(*c*) ὅταν δὲ ἴδητε τὸ βδέλυγμα τῆς ἐρημώσεως ἑστηκότα ὅπου οὐ δεῖ, ὁ ἀναγινώσκων νοείτω, τότε οἱ ἐν τῇ Ἰουδαίᾳ φευγέτωσαν εἰς τὰ ὄρη.

(*d*) καὶ εἰ μὴ ἐκολόβωσεν Κύριος τὰς ἡμέρας, οὐκ ἂν ἐσώθη πᾶσα σάρξ.

Write a grammatical note on the construction of οὐκ...πᾶσα. What difference of meaning would there be if the negative were joined with πᾶσα?

8. Write short notes on the following words and phrases:

ἀρχισυνάγωγος—Δεκάπολις—ὁ βασιλεὺς Ἡρῴδης—ὀφθαλμὸς πονηρός—τὸ ἱκανὸν ποιῆσαι—Ἀριμάθαια—σημεῖα καὶ τέρατα.

9. Retranslate into GREEK:

(*a*) And without a parable spake he not unto them: but privately to his own disciples he expounded all things.

(*b*) And Jesus said unto him, Go thy way; thy faith hath made thee whole. And straightway he received his sight, and followed him in the way.

(*c*) Have ye not read even this scripture; The stone which the builders rejected, the same was made the head of the corner: this was from the Lord, and it is marvellous in our eyes?

MONDAY, *June* 2, 1884. 9—12.

I. SAMUEL, I—XIX.

1. TRANSLATE:

(a) וּלְחַנָּה יִתֵּן מָנָה אַחַת אַפָּיִם כִּי אֶת־חַנָּה אָהֵב וַיהוָה סָגַר רַחְמָהּ׃ וְכִעַסַּתָּהּ צָרָתָהּ גַּם־כַּעַס בַּעֲבוּר הַרְּעִמָהּ כִּי־סָגַר יְהוָה בְּעַד רַחְמָהּ׃ וְכֵן יַעֲשֶׂה שָׁנָה בְשָׁנָה מִדֵּי עֲלֹתָהּ בְּבֵית יְהוָה כֵּן תַּכְעִסֶנָּה וַתִּבְכֶּה וְלֹא תֹאכַל׃ וַיֹּאמֶר לָהּ אֶלְקָנָה אִישָׁהּ חַנָּה לָמָּה תִבְכִּי וְלָמָּה לֹא תֹאכְלִי וְלָמָּה יֵרַע לְבָבֵךְ הֲלוֹא אָנֹכִי טוֹב לָךְ מֵעֲשָׂרָה בָנִים׃ וַתָּקָם חַנָּה אַחֲרֵי אָכְלָהּ בְשִׁלֹה וְאַחֲרֵי שָׁתוֹ וְעֵלִי הַכֹּהֵן יֹשֵׁב עַל־הַכִּסֵּא עַל־מְזוּזַת הֵיכַל יְהוָה׃ וְהִיא מָרַת נָפֶשׁ וַתִּתְפַּלֵּל עַל־יְהוָה וּבָכֹה תִבְכֶּה׃

° ר׳ דגושה ° כצ״ל

Explain the expressions שָׁנָה בְשָׁנָה מִדֵּי עֲלֹתָהּ—מָנָה אַחַת אַפָּיִם and the Masoretic notes.

Parse וְכִעַסַּתָּהּ—יֵרַע.

(b) אַל־תַּרְבּוּ תְדַבְּרוּ גְּבֹהָה גְּבֹהָה יֵצֵא עָתָק מִפִּיכֶם כִּי אֵל דֵּעוֹת יְהוָה וְלוֹ נִתְּכֻנוּ עֲלִלוֹת׃ קֶשֶׁת גִּבֹּרִים חַתִּים וְנִכְשָׁלִים אָזְרוּ חָיִל׃ שְׂבֵעִים בַּלָּחֶם נִשְׂכָּרוּ וּרְעֵבִים חָדֵלוּ עַד־עֲקָרָה יָלְדָה שִׁבְעָה וְרַבַּת בָּנִים אֻמְלָלָה׃ יְהוָה מֵמִית וּמְחַיֶּה מוֹרִיד שְׁאוֹל וַיָּעַל׃

° ולו ק ° קמץ בד״ק

Explain the construction אַל תַּרְבּוּ תְדַבְּרוּ, and that of the first clause of the second verse.

Parse חַתִּים—אֻמְלָלָה—מֵמִית—וַיָּעַל.

(c) וַיֹּאמֶר זֶה יִהְיֶה מִשְׁפַּט הַמֶּלֶךְ אֲשֶׁר יִמְלֹךְ עֲלֵיכֶם אֶת־בְּנֵיכֶם יִקַּח וְשָׂם לוֹ בְּמֶרְכַּבְתּוֹ וּבְפָרָשָׁיו וְרָצוּ לִפְנֵי מֶרְכַּבְתּוֹ : וְלָשׂוּם לוֹ שָׂרֵי אֲלָפִים וְשָׂרֵי חֲמִשִּׁים וְלַחֲרֹשׁ חֲרִישׁוֹ וְלִקְצֹר קְצִירוֹ וְלַעֲשׂוֹת כְּלֵי־מִלְחַמְתּוֹ וּכְלֵי רִכְבּוֹ : וְאֶת־בְּנוֹתֵיכֶם יִקַּח לְרַקָּחוֹת וּלְטַבָּחוֹת וּלְאֹפוֹת : וְאֶת־שְׂדוֹתֵיכֶם וְאֶת־כַּרְמֵיכֶם וְזֵיתֵיכֶם הַטּוֹבִים יִקַּח וְנָתַן לַעֲבָדָיו : וְזַרְעֵיכֶם וְכַרְמֵיכֶם יַעְשֵׂר וְנָתַן לְסָרִיסָיו וְלַעֲבָדָיו : וְאֶת־עַבְדֵיכֶם וְאֶת־שִׁפְחוֹתֵיכֶם וְאֶת־בַּחוּרֵיכֶם הַטּוֹבִים וְאֶת־חֲמוֹרֵיכֶם יִקַּח וְעָשָׂה לִמְלַאכְתּוֹ :

Parse וְרָצוּ—לַחֲרֹשׁ—חֲרִישׁוֹ.

(d) וְחָרָשׁ לֹא יִמָּצֵא בְּכֹל אֶרֶץ יִשְׂרָאֵל כִּי־אָמְרוּ פְלִשְׁתִּים פֶּן יַעֲשׂוּ הָעִבְרִים חֶרֶב אוֹ חֲנִית : וַיֵּרְדוּ כָל־יִשְׂרָאֵל הַפְּלִשְׁתִּים לְלָטוֹשׁ אִישׁ אֶת־מַחֲרֵשְׁתּוֹ וְאֶת־אֵתוֹ וְאֶת־קַרְדֹּמוֹ וְאֵת מַחֲרֵשָׁתוֹ : וְהָיְתָה הַפְּצִירָה פִּים לַמַּחֲרֵשׁוֹת וְלָאֵתִים וְלִשְׁלֹשׁ קִלְשׁוֹן וּלְהַקְרֹדֹמִים וּלְהַצִּיב הַדָּרְבָן :

* אמרו ק

Discuss the different renderings proposed for the words

וְהָיְתָה הַפְּצִירָה פִּים

(e) וַיַּחֲמֹל שָׁאוּל וְהָעָם עַל־אֲגַג וְעַל־מֵיטַב הַצֹּאן וְהַבָּקָר וְהַמִּשְׁנִים וְעַל־הַכָּרִים וְעַל־כָּל־הַטּוֹב וְלֹא אָבוּ הַחֲרִימָם וְכָל־הַמְּלָאכָה נְמִבְזָה וְנָמֵס אֹתָהּ הֶחֱרִימוּ : וַיְהִי דְּבַר יְהוָה אֶל־שְׁמוּאֵל לֵאמֹר : נִחַמְתִּי כִּי־הִמְלַכְתִּי אֶת־שָׁאוּל לְמָלֶךְ כִּי־שָׁב מֵאַחֲרַי וְאֶת־דְּבָרַי לֹא הֵקִים וַיִּחַר לִשְׁמוּאֵל וַיִּזְעַק אֶל־יְהוָה כָּל־הַלָּיְלָה :

Parse אָבוּ—הַחֲרִימָם—נְמֵס—הֶחֱרִימוּ.

(f) וַיְהִי בְּבוֹאָם בְּשׁוּב דָּוִד מֵהַכּוֹת אֶת־הַפְּלִשְׁתִּי וַתֵּצֶאנָה הַנָּשִׁים מִכָּל־עָרֵי יִשְׂרָאֵל לָשׁוּר* וְהַמְּחוֹלוֹת לִקְרַאת שָׁאוּל הַמֶּלֶךְ בְּתֻפִּים בְּשִׂמְחָה וּבְשָׁלִשִׁים :

* לשיר ק

וַתְּעַנֶּיהָ הַנָּשִׁים הַמְשַׂחֲקוֹת וַתֹּאמַרְן הִכָּה שָׁאוּל בַּאֲלָפָיו וְדָוִד בְּרִבְבֹתָיו : וַיִּחַר לְשָׁאוּל מְאֹד וַיֵּרַע בְּעֵינָיו הַדָּבָר הַזֶּה וַיֹּאמֶר נָתְנוּ לְדָוִד רְבָבוֹת וְלִי נָתְנוּ הָאֲלָפִים וְעוֹד לוֹ אַךְ הַמְּלוּכָה : וַיְהִי שָׁאוּל עֹיֵן אֶת־דָּוִד מֵהַיּוֹם הַהוּא וְהָלְאָה :

* באלפיו ק׳

Parse וַיִּחַר—לִקְרַאת.

2. Write notes on the words and phrases:

—אִישׁ הַבַּנִּים—כֹּל פִּנַּת הָעָם—וַיִּטוּ אַחֲרֵי הַבָּצַע—נְאֻם יְהוָה—בִּי אֲדֹנִי חַי נַפְשֶׁךָ כְּבַחֲעִי מַעֲנָה צֶמֶר שָׂדֶה—לָלַת—חָתָן לַמֶּלֶךְ.

3. Translate with short explanations:

(a) וְהָיָה כָּל־הַנּוֹתָר בְּבֵיתְךָ יָבוֹא לְהִשְׁתַּחֲוֹת לוֹ לַאֲגוֹרַת כֶּסֶף וְכִכַּר־לָחֶם וְאָמַר סְפָחֵנִי נָא אֶל־אַחַת הַכְּהֻנּוֹת לֶאֱכֹל פַּת־לָחֶם :

(b) לְפָנִים בְּיִשְׂרָאֵל כֹּה־אָמַר הָאִישׁ בְּלֶכְתּוֹ לִדְרוֹשׁ אֱלֹהִים לְכוּ וְנֵלְכָה עַד־הָרֹאֶה כִּי לַנָּבִיא הַיּוֹם יִקָּרֵא לְפָנִים הָרֹאֶה :

(c) אֶת־מִי רַצּוֹתִי וּמִיַּד־מִי לָקַחְתִּי כֹּפֶר וְאַעְלִים עֵינַי בּוֹ וְאָשִׁיב לָכֶם :

(d) כִּי חַטַּאת־קָסֶם מָרִי וְאָוֶן וּתְרָפִים הַפְּצַר יַעַן מָאַסְתָּ אֶת־דְּבַר יְהוָה וַיִּמְאָסְךָ מִמֶּלֶךְ :

(e) וַיֹּאמֶר שָׁאוּל אֶתְּנֶנָּה לוֹ וּתְהִי־לוֹ לְמוֹקֵשׁ וּתְהִי־בוֹ יַד־פְּלִשְׁתִּים וַיֹּאמֶר שָׁאוּל אֶל־דָּוִד בִּשְׁתַּיִם תִּתְחַתֵּן בִּי הַיּוֹם :

(f) וְכוֹבַע נְחֹשֶׁת עַל־רֹאשׁוֹ וְשִׁרְיוֹן קַשְׂקַשִּׂים הוּא לָבוּשׁ וּמִשְׁקַל הַשִּׁרְיוֹן חֲמֵשֶׁת־אֲלָפִים שְׁקָלִים נְחֹשֶׁת : וּמִצְחַת נְחֹשֶׁת עַל־רַגְלָיו וְכִידוֹן נְחֹשֶׁת בֵּין כְּתֵפָיו :

4. Point the following, supplying the two principal accents:

(a) וישמעו פלשתים את קול התרועה ויאמרו מה קול התרועה הגדולה הזאת במחנה העברים וידעו כי ארון יהוה בא אל המחנה: ויראו הפלשתים כי אמרו בא אלהים אל המחנה ויאמרו אוי לנו כי לא היתה כזאת אתמול שלשם: אוי לנו מי יצילנו מיד האלהים האדירים האלה אלה הם האלהים המכים את מצרים בכל מכה במדבר:

(b) ויאמר לו נשא כליו עשה כל אשר בלבבך נטה לך הנני עמך כלבבך: ויאמר יהונתן הנה אנחנו עברים אל האנשים ונגלינו אליהם: אם כה יאמרו אלינו דמו עד הגיענו אליכם ועמדנו תחתינו ולא נעלה אליהם: ואם כה יאמרו עלו עלינו ועלינו כי נתנם יהוה בידנו וזה לנו האות:

5. Translate into Biblical Hebrew:

(a) Therefore Eli said unto Samuel, Go, lie down: and it shall be, if he call thee, that thou shalt say, Speak, Lord; for thy servant heareth. So Samuel went and lay down in his place. And the Lord came, and stood, and called as at other times, Samuel, Samuel. Then Samuel answered, Speak; for thy servant heareth.

(b) And Samuel sanctified Jesse and his sons, and called them to the sacrifice. And it came to pass, when they were come, that he looked on Eliab, and said, Surely the Lord's anointed *is* before him. But the Lord said unto Samuel, Look not on his countenance, or on the height of his stature; because I have refused him: for *the Lord seeth* not as man seeth; for man looketh on the outward appearance, but the Lord looketh on the heart.

THEOLOGICAL TRIPOS.

PART I.

MONDAY, *May* 26, 1884. 9—12.

OLD TESTAMENT. GENERAL PAPER.

(BOOKS SELECTED UNDER REGULATION I. B: JOSHUA, JUDGES, RUTH, I. II. SAMUEL, JOB, THE MINOR PROPHETS.)

A.

[*Candidates are requested not to answer more than* five *of the first* seven *questions.*]

1. STATE clearly the spiritual truths which are made known in the record of the Creation and of the Fall of Man.

Or,

Point out the importance of the Call of Abraham for the religious history of the world. What is the lesson of his meeting with Melchizedek?

2. 'It seems impossible for us to imagine the development of Israel as taking place in any other part of our planet than just on the soil of Palestine.' By what arguments can this statement be supported?

Or,

So Joshua took all that land, the hills, and all the south country, and all the land of Goshen, and the valley, and the plain, and the mountain of Israel, and the valley of the same (Josh. xi. 16). Distinguish the regions referred to in this passage, and give the original terms by which they are designated.

3. Collect the references to Esau in the later books of the Bible; and shew how far the notices of the history of Edom in the prophets confirm the literal accuracy of the narrative of Genesis.

Or,

It has been said that 'Israel has no history except in as far as it is the organ of revelation.' Can you apply this principle to explain the records and silences of the Bible from Abraham to Samuel?

4. What light does the Song of Deborah throw upon the political and moral condition of the tribes of Israel during the period of the Judges? What evidence is there of the recognition of a central sanctuary at that time?

5. Give a short account of *Berosus, Caleb, Gideon, Jethro, Manetho, Nahash.*

6. Distinguish (giving the Hebrew and Greek names) the different kinds of sacrifices appointed in the Mosaic Law. Describe in detail the law of the burnt-offering.

Or,

Shew from the legislation on the Avenger of Blood that the Mosaic Law 'reforms and mitigates barbarous institutions and lays on them restrictions tending to their gradual abolition.'

7. Mark the successive steps which had been made in the development of the Messianic idea up to the death of David.

8. Explain the following passages, and give the contexts in which they are found in the Old and New Testaments:

(*a*) *Abraham rejoiced to see my day: and he saw it and was glad.*

(*b*) *I am the God of Abraham and the God of Isaac and the God of Jacob.*

(*c*) *Let thy Thummim and thy Urim be with thy holy one, whom thou didst prove at Massah, and with whom thou didst strive at the waters of Meribah.*

(*d*) *The word of the Lord was precious in those days: there was no open vision.*

(*e*) *I will be his father and he shall be my son.*

9. Answer *two* of the following questions:

(1) What are the chief authorities for the text of the Old Testament? Discuss the chief textual problems offered by the Books of Samuel.

(2) Explain with reference to the character of the versions quoted:

Ο'. *ὅτι ἁμαρτία οἰώνισμά ἐστιν, ὀδύνην καὶ πόνους θεραφὶν ἐπάγουσιν.* Alia exempl. *ὅτι οἰώνισμα ἁμαρτία ἐστίν, παραπικρασμὸς ἀδικία, καὶ θεραφὶν ὀδύνην καὶ πόνους ἐπάγουσιν.* Ἀ. (*ὅτι*) *ἁμαρτία μαντείας παραπικρασμὸς καὶ ἀνωφελὲς καὶ μορφωμάτων ἐκβιβασμός.* Σ. *ὅτι ἁμαρτία τῆς μαντείας τὸ προσερίζειν, ἡ δὲ ἀνομία τῶν εἰδώλων τὸ ἀπειθεῖν.*

(3) Distinguish as exactly as you can the different elements which formed the basis of the version of the Old Testament which was revised in 1611. What scholars were engaged upon the revision? Describe a volume of the Old Testament in the Complutensian Polyglot.

B.

1. Discuss the plan and purpose of the book of Job: and compare the treatment of its subject with that to be found elsewhere in the O. T.

2. What light is thrown upon the composition of the Prophetical Books by the writings of Hosea and Amos? Quote from them passages which seem to refer to (*a*) the law of Moses, (*b*) the worship at Jerusalem, (*c*) the Schools of the Prophets.

3. Trace the history of the High Priesthood from Solomon to Nehemiah.

4. Compare the influence of Chaldæa and Egypt upon Jewish thought and literature.

5. Explain and give the context of

(*a*) *They are all hot as an oven and have devoured their judges; all their kings are fallen.*

(*b*) *Art thou better than populous No, that was situate among the rivers?*

(*c*) *Offer it now unto thy governor; will he be pleased with thee or accept thy person?*

(*d*) *I will cut off the remnant of Baal from this place and the name of the Chemarims with the priests.*

(*e*) *The day of the Lord is near in the valley of decision.*

(*f*) *Have not I brought up Israel out of the land of Egypt? and the Egyptians from Caphtor and the Syrians from Kir?*

(*g*) *The mountain of the house of the Lord shall be established in the top of the mountains.*

(*h*) *Behold the fear of the Lord that is wisdom; and to depart from evil is understanding.*

6. Give a short account of the book of Jonah *or* Habakkuk, Ecclesiasticus, *or* the book of Enoch, the Pirke Aboth *or* Contra Apionem.

7. Sketch the history of Jewish foreign politics from 640 B.C.—586 B.C. *or* from 203 B.C.—141 B.C.

8. Examine how far it is true that the political condition of the Jews is reflected in Post-exilic literature by their treatment of the Messianic hope.

MONDAY, *May* 26, 1884. 1.30—4.30.

I. AND II. SAMUEL.

1. TRANSLATE with notes on the words marked *:

(*a*) וַיְהִי הַיּוֹם וַיִּזְבַּח אֶלְקָנָה וְנָתַן לִפְנִנָּה אִשְׁתּוֹ וּלְכָל־בָּנֶיהָ וּבְנוֹתֶיהָ
מָנוֹת׃ וּלְחַנָּה יִתֵּן מָנָה *אַחַת *אַפַּיִם כִּי אֶת־חַנָּה אָהֵב וַיהוָה סָגַר רַחְמָהּ׃
*וְכִעַסַתָּהּ צָרָתָהּ גַּם־כַּעַס בַּעֲבוּר הַרְּעִמָהּ כִּי־סָגַר יְהוָה *בְּעַד רַחְמָהּ וְכֵן יַעֲשֶׂה
שָׁנָה בְשָׁנָה *מִדֵּי עֲלֹתָהּ בְּבֵית יְהוָה כֵּן תַּכְעִסֶנָּה וַתִּבְכֶּה וְלֹא תֹאכַל׃

Explain the principle on which you construe the tenses of the verbs in this passage.

(b) אִם־יֶחֱטָא אִישׁ לְאִישׁ *וּפִלְלוֹ *אֱלֹהִים וְאִם לַיהוָה יֶחֱטָא אִישׁ מִי יִתְפַּלֶּל־לוֹ וְלֹא יִשְׁמְעוּ לְקוֹל אֲבִיהֶם כִּי־חָפֵץ יְהוָה לַהֲמִיתָם׃

Write a note on the root חטא.

(c) וּשְׁמוּאֵל *טֶרֶם יֵדַע אֶת־יְהוָה וְטֶרֶם יִגָּלֶה אֵלָיו דְּבַר־יְהוָה׃

(d) וּבֵין הַמַּעְבְּרוֹת אֲשֶׁר בְּקֶשׁ יוֹנָתָן לַעֲבֹר עַל־*מַצַּב פְּלִשְׁתִּים שֵׁן־הַסֶּלַע מֵהָעֵבֶר מִזֶּה וְשֵׁן־הַסֶּלַע מֵהָעֵבֶר מִזֶּה וְשֵׁם הָאֶחָד בּוֹצֵץ וְשֵׁם הָאֶחָד סֶנֶה׃ הַשֵּׁן הָאֶחָד מָצוּק מִצָּפוֹן מוּל מִכְמָשׂ וְהָאֶחָד מִנֶּגֶב מוּל גָּבַע׃

Give the different significations of prefix מ, and illustrate its use in this passage.

(e) כֹּה אָמַר יְהוָה *צְבָאוֹת פָּקַדְתִּי אֵת אֲשֶׁר־עָשָׂה עֲמָלֵק לְיִשְׂרָאֵל אֲשֶׁר־שָׂם לוֹ בַּדֶּרֶךְ בַּעֲלֹתוֹ מִמִּצְרָיִם׃

Give the different meanings of the root פקד and illustrate them from the books of Samuel.

(f) הִנֵּה ׀ הַיּוֹם הַזֶּה רָאוּ עֵינֶיךָ אֵת אֲשֶׁר־נְתָנְךָ יְהוָה הַיּוֹם בְּיָדִי בַּמְּעָרָה *וְאָמַר לַהֲרָגְךָ *וַתָּחֹס עָלֶיךָ וָאֹמַר לֹא־אֶשְׁלַח יָדִי בַּאדֹנִי כִּי־מְשִׁיחַ יְהוָה הוּא׃

(g) וַיֹּאמֶר לְלַמֵּד בְּנֵי־יְהוּדָה *קֶשֶׁת הִנֵּה כְתוּבָה עַל־סֵפֶר *הַיָּשָׁר׃

(h) וַיֵּלֶךְ הַמֶּלֶךְ וַאֲנָשָׁיו יְרוּשָׁלַם אֶל־הַיְבוּסִי יוֹשֵׁב הָאָרֶץ וַיֹּאמֶר לְדָוִד לֵאמֹר לֹא־תָבוֹא הֵנָּה כִּי אִם־*הָסִירְךָ הָעִוְרִים וְהַפִּסְחִים לֵאמֹר לֹא־יָבוֹא דָוִד הֵנָּה׃ וַיִּלְכֹּד דָּוִד אֵת מְצֻדַת צִיּוֹן הִיא עִיר דָּוִד׃ וַיֹּאמֶר דָּוִד בַּיּוֹם הַהוּא כָּל־מַכֵּה יְבוּסִי *וְיַגַּע *בַּצִּנּוֹר וְאֶת־הַפִּסְחִים וְאֶת־הָעִוְרִים שְׂנֻאֵי נֶפֶשׁ דָּוִד עַל־כֵּן יֹאמְרוּ־עִוֵּר וּפִסֵּחַ לֹא *יָבוֹא אֶל־הַבָּיִת׃ וַיֵּשֶׁב דָּוִד בַּמְּצֻדָה וַיִּקְרָא־לָהּ עִיר דָּוִד וַיִּבֶן דָּוִד סָבִיב מִן־הַמִּלּוֹא *וָבָיְתָה׃

(i) וַתֹּאמֶר הָאִשָּׁה וְלָמָּה חָשַׁבְתָּה כָּזֹאת עַל־עַם אֱלֹהִים *וּמִדַּבֵּר הַמֶּלֶךְ הַדָּבָר הַזֶּה *כְּאַשֵּׁם *לְבִלְתִּי הָשִׁיב הַמֶּלֶךְ אֶת־נִדְּחוֹ׃ כִּי־מוֹת נָמוּת וְכַמַּיִם

*הַנְּגָרִים אַרְצָה אֲשֶׁר לֹא יֵאָסְפוּ וְלֹא־*יִשָּׂא אֱלֹהִים *נָפֶשׁ וְחָשַׁב מַחֲשָׁבוֹת לְבִלְתִּי
יַדַּח מִמֶּנּוּ נִדָּח : וְעַתָּה *אֲשֶׁר־בָּאתִי לְדַבֵּר אֶל־הַמֶּלֶךְ אֲדֹנִי אֶת־הַדָּבָר הַזֶּה
כִּי יְרָאֻנִי הָעָם וַתֹּאמֶר שִׁפְחָתְךָ אֲדַבְּרָה־נָּא אֶל־הַמֶּלֶךְ אוּלַי יַעֲשֶׂה הַמֶּלֶךְ אֶת־
דְּבַר אֲמָתוֹ :

(k) וְאֵלֶּה דִּבְרֵי דָוִד הָאַחֲרֹנִים *נְאֻם דָּוִד בֶּן־יִשַׁי וּנְאֻם הַגֶּבֶר *הֻקַּם *עָל
מְשִׁיחַ אֱלֹהֵי יַעֲקֹב וּנְעִים זְמִרוֹת יִשְׂרָאֵל : רוּחַ יְהוָה דִּבַּר־בִּי *וּמִלָּתוֹ עַל־
לְשׁוֹנִי : אָמַר אֱלֹהֵי יִשְׂרָאֵל לִי דִּבֶּר צוּר יִשְׂרָאֵל מֹשֵׁל בָּאָדָם צַדִּיק מֹשֵׁל
יִרְאַת אֱלֹהִים : וּכְאוֹר בֹּקֶר יִזְרַח־שֶׁמֶשׁ בֹּקֶר לֹא עָבוֹת מִנֹּגַהּ מִמָּטָר דֶּשֶׁא
מֵאָרֶץ : כִּי־*לֹא־כֵן בֵּיתִי עִם־אֵל כִּי בְרִית עוֹלָם שָׂם לִי עֲרוּכָה בַכֹּל וּשְׁמֻרָה
כִּי־כָל־יִשְׁעִי וְכָל־חֵפֶץ כִּי־לֹא יַצְמִיחַ : *וּבְלִיַּעַל כְּקוֹץ *מֻנָּד כֻּלָּהֶם כִּי־לֹא בְיָד
יִקָּחוּ : וְאִישׁ יִגַּע בָּהֶם יִמְּלָא בַרְזֶל וְעֵץ חֲנִית וּבָאֵשׁ שָׂרוֹף יִשָּׂרְפוּ *בַּשָּׁבֶת :

2. Point the following passages:

יהיה יהוה לדין ושפט ביני ובינך וירא וירב את ריבי וישפטני מידך :

ויאמר אליו דוד התורדני אל הגדוד הזה ויאמר השבעה לי באלהים אם תמיתני ואם תסגרני ביד אדני ואורדך אל הגדוד הזה : וירדהו והנה נטשים על פני כל הארץ אכלים ושתים וחגגים בכל השלל הגדול אשר לקחו מארץ פלשתים ומארץ יהודה : ויכם דוד מהנשף ועד הערב למחרתם ולא נמלט מהם איש כי אם ארבע מאות איש נער אשר רכבו על הגמלים וינסו : ויצל דוד את כל אשר לקחו עמלק ואת שתי נשיו הציל דוד : ולא נעדר להם מן הקטן ועד הגדול ועד בנים ובנות ומשלל ועד כל אשר לקחו להם הכל השיב דוד :

וירא דוד כי עבדיו מתלחשים ויבן דוד כי מת הילד ויאמר דוד אל עבדיו המת הילד ויאמרו מת : ויקם דוד מהארץ וירחץ ויסך ויחלף שמלתו ויבא בית יהוה וישתחו ויבא אל ביתו וישאל וישימו לו לחם ויאכל : ויאמרו עבדיו אליו מה הדבר הזה אשר עשיתה בעבור הילד חי צמת ותבך וכאשר מת הילד קמת ותאכל לחם : ויאמר בעוד הילד חי צמתי ואבכה כי אמרתי מי יודע יחנני יהוה וחי הילד : ועתה מת למה זה אני צם האוכל להשיבו עוד אני הלך אליו והוא לא ישוב אלי :

3. Annotate the words marked with an * in the following passages, and illustrate them from the books of Samuel or other books of the Old Testament:

(a) וּבְכֹל אֲשֶׁר־יִפְנֶה *יַרְשִׁיעַ :

(b) הִנֵּה שָׁלַח דָּוִד מַלְאָכִים מֵהַמִּדְבָּר *לְבָרֵךְ אֶת־אֲדֹנֵינוּ *וַיַּעַט בָּהֶם :

(c) וַיָּקָם אָדָם לְרָדְפְךָ *וּלְבַקֵּשׁ אֶת־נַפְשֶׁךָ וְהָיִתָה *נֶפֶשׁ אֲדֹנִי *צְרוּרָה
*בִּצְרוֹר *הַחַיִּים אֵת יְהוָה אֱלֹהֶיךָ וְאֵת נֶפֶשׁ אֹיְבֶיךָ *יְקַלְּעֶנָּה בְּתוֹךְ *כַּף הַקָּלַע :

(d) וַיַּעַשׂ אַבְשָׁלוֹם כַּדָּבָר הַזֶּה לְכָל־יִשְׂרָאֵל אֲשֶׁר־יָבֹאוּ לַמִּשְׁפָּט אֶל־הַמֶּלֶךְ
*וַיְגַנֵּב אַבְשָׁלוֹם אֶת־*לֵב אַנְשֵׁי יִשְׂרָאֵל :

(e) וְאֶת־אַבְשָׁלוֹם הָלְכוּ מָאתַיִם אִישׁ מִירוּשָׁלַם קְרֻאִים וְהֹלְכִים *לְתֻמָּם
וְלֹא יָדְעוּ כָּל־דָּבָר :

(f) כִּי *בְכָה אָרוּץ *גְּדוּד בֵּאלֹהַי אֲדַלֶּג־שׁוּר : דֶּאֶל תָּמִים דַּרְכּוֹ
אִמְרַת יְהוָה *צְרוּפָה *מָגֵן הוּא לְכֹל הַחֹסִים בּוֹ :

4. Give the original Hebrew corresponding to the following:

(a) Talk no more so exceeding proudly; let not arrogancy come out of your mouth: for the LORD is a God of knowledge, and by him actions are weighed. The bows of the mighty men are broken, and they that stumbled are girded with strength. They that were full have hired out themselves for bread; and they that were hungry ceased: so that the barren hath born seven; and she that hath many children is waxed feeble.

(b) And when thy days be fulfilled, and thou shalt sleep with thy fathers, I will set up thy seed after thee, which shall proceed out of thy bowels, and I will establish his kingdom. He shall build an house for my name, and I will stablish the throne of his kingdom for ever. I will be his father, and he shall be my son. If he commit iniquity, I will chasten him with the rod of men, and with the stripes of the children of men.

(c) Then the earth shook and trembled; the foundations of heaven moved and shook, because he was wroth. There went up a smoke out of his nostrils, and fire out of his mouth devoured: coals were kindled by it. He bowed the heavens also, and came down; and darkness was under his feet. And he rode upon a cherub, and did fly: and he was seen upon the wings of the wind.

TUESDAY, *May* 27, 1884. 9—12.

HISTORICAL BOOKS OF THE OLD TESTAMENT (HEBREW).

1. TRANSLATE the following:

(a) הָלוֹךְ הָלְכוּ הָעֲצִים לִמְשֹׁחַ עֲלֵיהֶם מֶלֶךְ וַיֹּאמְרוּ לַזַּיִת מָלְכָה עָלֵינוּ׃ וַיֹּאמֶר לָהֶם הַזַּיִת הָחָדַלְתִּי אֶת־דִּשְׁנִי אֲשֶׁר־בִּי יְכַבְּדוּ אֱלֹהִים וַאֲנָשִׁים וְהָלַכְתִּי לָנוּעַ עַל־הָעֵצִים׃ וַיֹּאמְרוּ הָעֵצִים לַתְּאֵנָה לְכִי־אַתְּ מָלְכִי עָלֵינוּ׃ וַתֹּאמֶר לָהֶם הַתְּאֵנָה הָחָדַלְתִּי אֶת־מָתְקִי וְאֶת־תְּנוּבָתִי הַטּוֹבָה וְהָלַכְתִּי לָנוּעַ עַל־הָעֵצִים׃ וַיֹּאמְרוּ הָעֵצִים לַגֶּפֶן לְכִי־אַתְּ מָלְכִי עָלֵינוּ׃ וַתֹּאמֶר לָהֶם הַגֶּפֶן הָחָדַלְתִּי אֶת־תִּירוֹשִׁי הַמְשַׂמֵּחַ אֱלֹהִים וַאֲנָשִׁים וְהָלַכְתִּי לָנוּעַ עַל־הָעֵצִים׃ וַיֹּאמְרוּ כָל־הָעֵצִים אֶל־הָאָטָד לֵךְ אַתָּה מְלָךְ־עָלֵינוּ׃ וַיֹּאמֶר הָאָטָד אֶל־הָעֵצִים אִם בֶּאֱמֶת אַתֶּם מֹשְׁחִים אֹתִי לְמֶלֶךְ עֲלֵיכֶם בֹּאוּ חֲסוּ בְצִלִּי וְאִם־אַיִן תֵּצֵא אֵשׁ מִן־הָאָטָד וְתֹאכַל אֶת־אַרְזֵי הַלְּבָנוֹן׃

(b) וְכִי־יִגַּח שׁוֹר אֶת־אִישׁ אוֹ אֶת־אִשָּׁה וָמֵת סָקוֹל יִסָּקֵל הַשּׁוֹר וְלֹא יֵאָכֵל אֶת־בְּשָׂרוֹ וּבַעַל הַשּׁוֹר נָקִי׃ וְאִם שׁוֹר נַגָּח הוּא מִתְּמֹל שִׁלְשֹׁם וְהוּעַד בִּבְעָלָיו וְלֹא יִשְׁמְרֶנּוּ וְהֵמִית אִישׁ אוֹ אִשָּׁה הַשּׁוֹר יִסָּקֵל וְגַם־בְּעָלָיו יוּמָת׃ אִם־כֹּפֶר יוּשַׁת עָלָיו וְנָתַן פִּדְיֹן נַפְשׁוֹ כְּכֹל אֲשֶׁר־יוּשַׁת עָלָיו׃ אוֹ־בֵן יִגַּח אוֹ־בַת יִגָּח כַּמִּשְׁפָּט הַזֶּה יֵעָשֶׂה לוֹ׃ אִם־עֶבֶד יִגַּח הַשּׁוֹר אוֹ אָמָה כֶּסֶף שְׁלֹשִׁים שְׁקָלִים יִתֵּן לַאדֹנָיו וְהַשּׁוֹר יִסָּקֵל׃ וְכִי־יִפְתַּח אִישׁ בּוֹר אוֹ כִּי־יִכְרֶה אִישׁ בֹּר וְלֹא יְכַסֶּנּוּ וְנָפַל־שָׁמָּה שׁוֹר אוֹ חֲמוֹר׃ בַּעַל הַבּוֹר יְשַׁלֵּם כֶּסֶף יָשִׁיב לִבְעָלָיו וְהַמֵּת יִהְיֶה־לּוֹ׃

Explain the construction of יאכל את בשרו.

Parse הועד, יושת. What is the plural of אמה?

Enumerate the various senses which כִּי is used to express in the Bible.

(c) וְכָל־מוֹאָב שָׁמְעוּ כִּי־עָלוּ הַמְּלָכִים לְהִלָּחֶם בָּם וַיִּצְעֲקוּ מִכֹּל חֹגֵר
חֲגֹרָה וָמַעְלָה וַיַּעַמְדוּ עַל־הַגְּבוּל׃ וַיַּשְׁכִּימוּ בַבֹּקֶר וְהַשֶּׁמֶשׁ זָרְחָה עַל־הַמָּיִם וַיַּרְאוּ
מוֹאָב מִנֶּגֶד אֶת־הַמַּיִם אֲדֻמִּים כַּדָּם׃ וַיֹּאמְרוּ דָּם זֶה הֶחֱרֵב נָחֲרְבוּ הַמְּלָכִים וַיַּכּוּ
אִישׁ אֶת־רֵעֵהוּ וְעַתָּה לַשָּׁלָל מוֹאָב׃ וַיָּבֹאוּ אֶל־מַחֲנֵה יִשְׂרָאֵל וַיָּקֻמוּ יִשְׂרָאֵל וַיַּכּוּ
אֶת־מוֹאָב וַיָּנֻסוּ מִפְּנֵיהֶם וַיָּבוֹא־בָהּ וְהַכּוֹת אֶת־מוֹאָב׃ וְהָעָרִים יַהֲרֹסוּ וְכָל־חֶלְקַת
טוֹבָה יַשְׁלִיכוּ אִישׁ־אַבְנוֹ וּמִלְּאוּהָ וְכָל־מַעְיַן־מַיִם יִסְתֹּמוּ וְכָל־עֵץ־טוֹב יַפִּילוּ עַד־
הִשְׁאִיר אֲבָנֶיהָ בַּקִּיר חָרֶשֶׁת וַיַּסֹּבּוּ הַקַּלָּעִים וַיַּכּוּהָ׃ וַיַּרְא מֶלֶךְ מוֹאָב כִּי־חָזַק
מִמֶּנּוּ הַמִּלְחָמָה וַיִּקַּח אִתּוֹ שְׁבַע־מֵאוֹת אִישׁ שֹׁלֵף חָרֶב לְהַבְקִיעַ אֶל־מֶלֶךְ אֱדוֹם
וְלֹא יָכֹלוּ׃ וַיִּקַּח אֶת־בְּנוֹ הַבְּכוֹר אֲשֶׁר־יִמְלֹךְ תַּחְתָּיו וַיַּעֲלֵהוּ עֹלָה עַל־הַחוֹמָה
וַיְהִי־קֶצֶף גָּדוֹל עַל־יִשְׂרָאֵל וַיִּסְעוּ מֵעָלָיו וַיָּשֻׁבוּ לָאָרֶץ׃

° ויכו ק׳ LXX. *καὶ εἰσῆλθον εἰσπορευόμενοι καὶ τύπτοντες τὴν Μωάβ.* What text does this rendering seem to represent?

(d) מַה־טֹּבוּ אֹהָלֶיךָ יַעֲקֹב מִשְׁכְּנֹתֶיךָ יִשְׂרָאֵל׃ כִּנְחָלִים נִטָּיוּ כְּגַנֹּת עֲלֵי
נָהָר כַּאֲהָלִים נָטַע יְהוָה כַּאֲרָזִים עֲלֵי־מָיִם׃ יֵזַל־מַיִם מִדָּלְיָו וְזַרְעוֹ בְּמַיִם רַבִּים וְיָרֹם
מֵאֲגַג מַלְכּוֹ וְתִנָּשֵׂא מַלְכֻתוֹ׃ אֵל מוֹצִיאוֹ מִמִּצְרַיִם כְּתוֹעַפֹת רְאֵם לוֹ יֹאכַל גּוֹיִם
צָרָיו וְעַצְמֹתֵיהֶם יְגָרֵם וְחִצָּיו יִמְחָץ׃

Comment on the forms אֹהָלֶיךָ, נִטָּיוּ, עֲלֵי.

Parse דָּלְיָו, וְתִנָּשֵׂא.

What emendation has been proposed for וְחִצָּיו?

(e) אַסְפָה עָלַימוֹ רָעוֹת חִצַּי אֲכַלֶּה־בָּם׃
מְזֵי רָעָב וּלְחֻמֵי רָשָׁף וְקֶטֶב מְרִירִי
וְשֶׁן־בְּהֵמוֹת אֲשַׁלַּח־בָּם עִם־חֲמַת זֹחֲלֵי עָפָר׃
מִחוּץ תְּשַׁכֵּל־חָרֶב וּמֵחֲדָרִים אֵימָה
גַּם־בָּחוּר גַּם־בְּתוּלָה יוֹנֵק עִם־אִישׁ שֵׂיבָה׃

2. What names are given in the Old and New Testaments respectively to the language spoken by the Israelites in Palestine? Explain these names in connection with the history of the language.

3. Write (*a*) the suffixed forms of פָּקַדְתִּי, מִן, אָב (sing. and plur.).

(*b*) the Niph'al Imperfect (future) of סבב, and the Hiph'il Perfect of קום.

(*c*) the following singulars with suffixes of the 3rd sing. masc. and 2nd plur. masc.

חֶרְפָּה, חַיִּן, פֹּעַל, אוֹיֵב, מוֹרָא, פֶּרֶשׁ, בַּרְזֶל, יוֹנָקֶת

4. Translate and explain the syntax of the following:

(*a*) עֲשֵׂה לְךָ תֵבַת עֲצֵי־גֹפֶר...וְכָפַרְתָּ אֹתָהּ.

(*b*) וַיִּתֵּן אֹתָם רָאשִׁים עַל־הָעָם...וְשָׁפְטוּ אֶת־הָעָם...אֶת־הַדָּבָר הַקָּשֶׁה יְבִיאוּן אֶל־מֹשֶׁה.

(*c*) אֲשֶׁר יִמָּצֵא אִתּוֹ...וָמֵת.

5. Write down the pausal forms of

קָשֶׁר, אַחַי, סוּסְךָ, מָרִי, הִתְעַזְּבִי, חָדְלוּ, שִׁמְעוּ, פָּקְדָה.

6. Point the following passages, marking methegh, ethnach and silluk and all penultimate accents:

(*a*) ואהבת את יהוה אלהיך ושמרת משמרתו וחקתיו ומשפטיו ומצותיו כל הימים: וידעתם היום כי לא את בניכם אשר לא ידעו ואשר לא ראו את מוסר יהוה אלהיכם את גדלו את ידו החזקה וזרעו הנטויה: ואת אתתיו ואת מעשיו אשר עשה בתוך מצרים לפרעה מלך מצרים ולכל ארצו: ואשר עשה לכם במדבר עד באכם עד המקום הזה: ואשר עשה לדתן ולאבירם בני אליאב בן ראובן אשר פצתה הארץ את פיה ותבלעם ואת בתיהם ואת אהליהם ואת כל היקום אשר ברגליהם בקרב כל ישראל: כי עיניכם הראת את כל מעשה יהוה הגדל אשר עשה: ושמרתם את כל המצוה אשר אנכי מצוך היום למען תחזקו ובאתם וירשתם את הארץ אשר אתם עברים שמה לרשתה:

(*b*) ומלכת שבא שמעת את שמע שלמה לשם יהוה ותבא לנסתו בחידות: ותבא ירושלמה בחיל כבד מאד גמלים נשאים בשמים וזהב רב מאד ואבן יקרה ותבא אל שלמה ותדבר אליו את כל אשר היה עם לבבה: ויגד לה שלמה את כל דבריה לא היה דבר נעלם מן המלך אשר לא הגיד לה: ותרא

מלכת שבא את כל חכמת שלמה והבית אשר בנה : ומאכל שלחנו ומושב עבדיו ומעמד משרתיו ומלבשיהם ומשקיו ועלתו אשר יעלה בית יהוה ולא היה בה עוד רוח : ותאמר אל המלך אמת היה הדבר אשר שמעתי בארצי על דבריך ועל חכמתך :

7. Translate into pointed biblical Hebrew:

The Voice sounded from the South; and as the people hastened to the South, lo! it sounded from the North. They turned to the North, and it came from the East. They turned to the East, and it came from the West. They turned thither, and it came from heaven. They lifted up their eyes to heaven, and it came from the depths of the earth. And they said one to another, Where shall wisdom be found? And the Voice went forth throughout the world, and was divided into seventy voices, according to the seventy tongues of men, and each nation heard the Voice in its own tongue, and their souls failed them; but Israel heard and suffered not. And each one in Israel heard it according to his capacity; old men, and youths, and boys, and sucklings and women: the Voice was to each one as each one had the power to receive it.

TUESDAY, *May* 27, 1884. 1.30—4.30 P.M.

NEW TESTAMENT. GENERAL PAPER.

A.

Candidates are requested not to answer more than **four** *out of the first* **six** *questions; nor more than* **two** *of the remaining* **four.**

1. WHAT inferences do you draw with respect to the authority of any books of the New Testament from (*a*) the Epistle of the Churches of Vienne and Lyons, (*b*) the writings of Tertullian?

2. Mention the (five) received books which are not enumerated in the Muratorian Fragment on the Canon. How do you account for their omission? What does 'Charlemagne's Bible' contain beside the received canonical books?

3. Shew that in the first and second centuries the Epistle of St James and the Apocalypse 'were received exactly in those places where their history was most likely to be known.'

4. Give some account of *two* of the following in relation to the history of the Canon of the New Testament: the last canon of the Synod of Laodicea, the Paschal Letter of Athanasius (A.D. 367), the Doctrine of the Lord by the Twelve Apostles to the Gentiles.

5. What line is taken with regard to the 'Antilegomena' in the Decrees of the Council of Trent, the Forty-two and the Thirty-nine Articles of the Church of England, the Westminster Confession, and the writings of Karlstadt?

6. Compare the relative claims of one of the disputed books of the New Testament with those of one of the spurious and one of the genuine books which have been rejected from the Canon.

7. Discuss the mutual relation of ℵ and B (Vaticanus). On what manuscript authority was the 'received text' formed?

8. What conjectures have been made as to the original text of the passages *ὃ καὶ ὑμᾶς ἀντίτυπον νῦν σώζει βάπτισμα* (1 Pet. iii. 21) and *μηδεὶς ὑμᾶς καταβραβευέτω θέλων ἐν ταπεινοφροσύνῃ καὶ θρησκείᾳ τῶν ἀγγέλων ἃ ἑόρακεν ἐμβατεύων* (Col. iii. 18)? Why has Conjectural Emendation less place in Biblical than in other Classical Criticism?

9. What services have been rendered towards the preservation, restoration, or criticism of the New Testament Text by Eusebius of Cæsarea, Cardinal Ximenes, Bentley, Vercellone?

Write the following lines in the manner of a facsimile from Codex Bezæ, giving the usual contractions in place of the words which are enclosed in square brackets:—

τότε λέγει αὐτῷ ὁ [Ἰησοῦς]· ὕπαγε ὀπίσω μου	tunc dicit ei [Iesus] vade post me
Σατανᾶ· γέγραπται γάρ·	Satana scriptum est enim
[κύριον] τὸν [θεόν] σου προσκυνήσεις	[dominum] [deum] tuum adorabis
καὶ αὐτῷ μόνῳ λατρεύσεις.	et ipsi soli servies.

10. Interpret the symbols in the following passage, and state what you conceive to be the true reading and on what grounds:—

ευδοκιασ cum ℵ*AB*D it vg Ir$^{\text{int 126}}$ Or$^{\text{int 3,948 ter}}$ (et diserte) Latinis rell omnib... *ς ευδοκια* cum ℵ^{c}B^{3}LPΔΞ unc^{10} al omn^{vid} (item A^{hymn}) cop syr^{utr} (Or ^{1,374} et ^{2,714} et ^{4,15}) Eus Cyr^{hr} Bas Cyr^{al} Epiph ^{1067} Pp gr pm.

B.

1. Examine the evidence which can be drawn from Josephus as to the popular language of Palestine in the first century. What is the history of the phrase 'Hellenistic Greek'? Point out briefly the peculiar fitness of Greek to preserve the permanent record of the apostolic teaching.

2. Write short notes on the following words, comparing, where you can, the usage of the New Testament with the usage of the LXX. and of classical writers: *ἐξομολογεῖσθαι, λύειν, μετριοπαθεῖν, πίστις, πληροφορεῖν, προσωποληπτεῖν, συνίστημι.*

Comment upon the forms *Δαβίδ, πρὸς Κολασσαεῖς, ἐφ' ἐλπίδι, λήμψομαι, ὕψησθε.*

3. Discuss the bearing of the style of the Apocalypse upon the questions of the authorship and the date of the book.

4. Illustrate from the New Testament the meaning of the synonyms: *τέκνον, υἱός—ἀδικία, ἀνομία, ἁμαρτία, παράβασις, παράπτωμα—αἰτεῖν, ἐρωτᾶν—νέος, καινός—λατρεία, διακονία, λειτουργία.*

5. Examine fully the construction of δικαιοῦν, and the usage of δικαίωσις and δικαίωμα.

6. Give, with brief grammatical notes, the exact meaning of the following passages, explaining and illustrating anything noteworthy in the use of articles, tenses, moods, cases, particles, prepositions, pronouns:

(a) πάλαι ὁ θεὸς λαλήσας τοῖς πατράσιν ἐν τοῖς προφήταις ἐπ' ἐσχάτου τῶν ἡμερῶν τούτων ἐλάλησεν ἡμῖν ἐν υἱῷ.

(b) κἂν μὲν ποιήσῃ καρπὸν εἰς τὸ μέλλον· εἰ δὲ μήγε, ἐκκόψεις αὐτήν.

(c) εἰ ἠγαπᾶτέ με, ἐχάρητε ἄν.

(d) εἰ γὰρ αὐτοὺς Ἰησοῦς κατέπαυσεν οὐκ ἂν περὶ ἄλλης ἐλάλει.

(e) μετανοήσατε εἰς τὸ ἐξαλειφθῆναι ὑμῶν τὰς ἁμαρτίας ὅπως ἂν ἔλθωσιν καιροὶ ἀναψύξεως.

(f) ὁ ἑωρακὼς μεμαρτύρηκε καὶ ἀληθινὴ αὐτοῦ ἐστιν ἡ μαρτυρία κἀκεῖνος οἶδεν ὅτι ἀληθῆ λέγει ἵνα καὶ ὑμεῖς πιστεύσητε.

(g) ὅταν ἀναγνωσθῇ παρ' ὑμῖν ἡ ἐπιστολή, ποιήσατε ἵνα καὶ ἐν τῇ Λαοδικέων ἐκκλησίᾳ ἀναγνωσθῇ, καὶ τὴν ἐκ Λαοδικείας ἵνα καὶ ὑμεῖς ἀναγνῶτε.

(h) αὕτη ἐστὶν ἡ αἰώνιος ζωή, ἵνα γινώσκωσί σε τὸν μόνον ἀληθινὸν θεὸν καὶ ὃν ἀπέστειλας Ἰησοῦν Χριστόν.

(i) ὅσοι εἰς Χριστὸν ἐβαπτίσθητε, Χριστὸν ἐνεδύσασθε· οὐκ ἔνι Ἰουδαῖος οὐδὲ Ἕλλην, οὐκ ἔνι δοῦλος οὐδὲ ἐλεύθερος, οὐκ ἔνι ἄρσεν καὶ θῆλυ· πάντες γὰρ ὑμεῖς εἷς ἐστὲ ἐν Χριστῷ Ἰησοῦ.

(k) τὸ καθίσαι ἐκ δεξιῶν μου καὶ ἐξ εὐωνύμων οὐκ ἔστιν ἐμὸν δοῦναι ἀλλ' οἷς ἡτοίμασται ὑπὸ τοῦ πατρός μου.

(l) ἄξιος εἶ ὁ κύριος καὶ ὁ θεὸς ἡμῶν λαβεῖν τὴν δόξαν καὶ τὴν τιμὴν καὶ τὴν δύναμιν· ὅτι σὺ ἔκτισας τὰ πάντα καὶ διὰ τὸ θέλημα σοῦ ἦσαν καὶ ἐκτίσθησαν.

(m) ὁ οἰκονόμος τῆς ἀδικίας.

(n) εἰ ἦσαν ἐξ ἡμῶν μεμενήκεισαν ἂν μεθ' ἡμῶν· ἀλλ' ἵνα φανερωθῶσιν ὅτι οὐκ εἰσὶ πάντες ἐξ ἡμῶν.

(o) ἐγένετο δὲ ἐν τῷ συμπληροῦσθαι τὰς ἡμέρας τῆς ἀναλήψεως αὐτοῦ καὶ αὐτὸς τὸ πρόσωπον ἐστήριξε τοῦ πορεύεσθαι εἰς Ἱερουσαλήμ.

7. Translate into Greek:

In reading God's word, he most profiteth not always that is most ready in turning of the book or in saying of it without the book; but he that is most turned into it, that is most inspired with the Holy Ghost; most in his heart and life altered and changed into that thing which he readeth; he that is daily less and less proud, less wrathful, less covetous, and less desirous of worldly and vain pleasures; he that daily, forsaking his old vicious life, increaseth in virtue more and more. And to be short, there is nothing that more maintaineth godliness of the mind and driveth away ungodliness than doth the continual reading or hearing of God's word, if it be joined with a godly mind and a good affection to know and follow God's will.

WEDNESDAY, *May* 28, 1884. 9—12.

THE FOUR GOSPELS, WITH SPECIAL REFERENCE TO THE GOSPEL ACCORDING TO ST MARK.

1. QUOTE and carefully examine the evidence of Papias touching the origin of St Mark's Gospel. How far is his statement borne out (*a*) by the phenomena of St Mark's Gospel in itself; (*b*) by a comparison of St Mark's Gospel with St Peter's speeches in the Acts? State briefly the principal theories of the origin of this Gospel which have been put forward.

2. Shew the significance, in relation to his Gospel, of the miracles which St Mark records; and of those which are peculiar to him.

3. What authority do you assign to the passage with which St Mark's Gospel closes in the Received Text? State the external and internal evidence on which your conclusion rests.

4. Translate, with notes on words spaced:

(*a*) *οὕτως ἐστὶν ἡ βασιλεία τοῦ θεοῦ ὡς ἄνθρωπος βάλῃ τὸν σπόρον ἐπὶ τῆς γῆς καὶ καθεύδῃ καὶ ἐγείρηται νύκτα καὶ ἡμέραν, καὶ ὁ σπόρος βλαστᾷ καὶ μηκύνηται ὡς οὐκ οἶδεν αὐτός. αὐτομάτη ἡ γῆ καρποφορεῖ, πρῶτον χόρτον, εἶτεν στάχυν, εἶτεν πλήρη σῖτον ἐν τῷ στάχυϊ. ὅταν δε παραδοῖ ὁ καρπός, εὐθὺς ἀποστέλλει τὸ δρέπανον, ὅτι παρέστηκεν ὁ θερισμός.*

(*β*) *ἤρξατο λέγειν ὁ Πέτρος αὐτῷ Ἰδοὺ ἡμεῖς ἀφήκαμεν πάντα καὶ ἠκολουθήκαμέν σοι. ἔφη ὁ Ἰησοῦς . . . πολλοὶ δὲ ἔσονται πρῶτοι ἔσχατοι καὶ ἔσχατοι πρῶτοι. ἦσαν δὲ ἐν τῇ ὁδῷ ἀναβαίνοντες εἰς Ἱεροσόλυμα, καὶ ἦν προάγων αὐτοὺς ὁ Ἰησοῦς, καὶ ἐθαμβοῦντο, οἱ δὲ ἀκολουθοῦντες ἐφοβοῦντο . . . . καὶ γὰρ ὁ υἱὸς τοῦ ἀνθρώπου οὐκ ἦλθεν διακονηθῆναι ἀλλὰ διακονῆσαι καὶ δοῦναι τὴν ψυχὴν αὐτοῦ λύτρον ἀντὶ πολλῶν.*

Give the substance of the portions omitted. Compare the parallel records.

(*γ*) *ἀπὸ δὲ τῆς συκῆς μάθετε τὴν παραβολήν· ὅταν ἤδη ὁ κλάδος αὐτῆς ἁπαλὸς γένηται καὶ ἐκφύῃ τὰ φύλλα, γινώσκετε ὅτι ἐγγὺς τὸ θέρος ἐστίν· οὕτως καὶ ὑμεῖς, ὅταν ἴδητε ταῦτα γινόμενα, γινώσκετε ὅτι ἐγγύς ἐστιν ἐπὶ θύραις. . . . βλέπετε ἀγρυπνεῖτε, οὐκ οἴδατε γὰρ πότε ὁ καιρός ἐστιν· ὡς ἄνθρωπος ἀπόδημος ἀφεὶς τὴν οἰκίαν αὐτοῦ καὶ δοὺς τοῖς δούλοις αὐτοῦ τὴν ἐξουσίαν, ἑκάστῳ τὸ ἔργον αὐτοῦ, καὶ τῷ θυρωρῷ ἐνετείλατο ἵνα γρηγορῇ.*

Remark on the construction. Indicate the plan on which this Discourse is framed.

(*δ*) *καὶ διαγενομένου τοῦ σαββάτου ἡ Μαρία ἡ Μαγδαληνὴ καὶ Μαρία ἡ τοῦ Ἰακώβου καὶ Σαλώμη ἠγόρασαν ἀρώματα ἵνα ἐλθοῦσαι ἀλείψωσιν αὐτόν. καὶ λίαν πρωὶ τῇ μιᾷ τῶν σαββάτων ἔρχονται ἐπὶ τὸ μνημεῖον ἀνατείλαντος τοῦ ἡλίου.*

5. Retranslate into the original Greek, correcting any defects in the A. V.

(*a*) And he said unto them, Is a candle brought to be put under a bushel or under a bed? and not to be set on a candlestick? For there is nothing hid, which shall not be manifested; neither was any thing kept secret, but that it should come abroad. If any man have ears to hear, let him hear.

(*b*) And he took them up in his arms, put his hands upon them, and blessed them.

(*c*) And they murmured against her. And Jesus said, Let her alone; why trouble ye her? she hath wrought a good work on me. For ye have the poor with you always, and whensoever ye will ye may do them good: but me ye have not always. She hath done what she could: she is come aforehand to anoint my body to the burying.

6. Write lexicographical notes on the following words:

ἀδημονῶ — ἀποδοκιμάζω — ἀπελπίζω — ἐνέχω — πάσχα — παράκλητος — μετάνοια—πώρωσις—καταλαμβάνω—ἄνωθεν.

7. What variations are found in the following passages? State without giving authorities in detail the reading which you adopt; and account for the reading of the T. R.

(*α*) *καθὼς γέγραπται ἐν τῷ Ἠσαίᾳ τῷ προφήτῃ.*

(*β*) *ἔνοχός ἐστιν αἰωνίου κρίσεως.*

(*γ*) *καὶ ἀκούσας αὐτοῦ πολλὰ ἐποίει.*

(*δ*) *καὶ πάλιν ἐξελθὼν ἐκ τῶν ὁρίων Τύρου καὶ Σιδῶνος ἦλθε πρὸς τὴν θάλασσαν τῆς Γαλιλαίας.*

(*ε*) *τοῦτό ἐστι τὸ αἷμά μου, τὸ τῆς καινῆς διαθήκης.*

(*ζ*) *καὶ ἐπληρώθη ἡ γραφὴ ἡ λέγουσα Καὶ μετὰ ἀνόμων ἐλογίσθη.*

8. Write notes on the grammar of the following passages, remarking on the reading if necessary:—

(*α*) *σπλαγχνίζομαι ἐπὶ τὸν ὄχλον ὅτι ἤδη ἡμέραι τρεῖς προσμένουσίν μοι.*

(*β*) *ἀμὴν λέγω, εἰ δοθήσεται τῇ γενεᾷ ταύτῃ σημεῖον.*

(*γ*) *ὁ δὲ Ἰησοῦς εἶπεν αὐτῷ τὸ Εἰ δύνῃ, πάντα δυνατὰ τῷ πιστεύοντι.*

(*δ*) *τὰ πνεύματα τὰ ἀκάθαρτα, ὅταν αὐτὸν ἐθεώρουν, προσέπιπτον αὐτῷ.*

(*ε*) *οὐκ ἂν ἐσώθη πᾶσα σάρξ.*

(*ζ*) *πρῶτός μου ἦν.*

Remark on the force of *ἀπό, διά, ἐπί*, giving examples from St Mark's Gospel.

9. Shew carefully the bearing of the quotations from the Old Testament in St Matthew i. and ii.

10. Compare the several accounts of any *three* of the following, noting the points of contact between the Synoptic Gospels and St John's Gospel: (*a*) the Confession of St Peter, (*b*) the Teaching on Divorce, (*c*) the Transfiguration, (*d*) the Cleansing of the Temple, (*e*) the Institution of the Eucharist.

Or,

Shew in a tabular form the plan of the third Gospel indicating the correspondence of its plan with the words in which the Evangelist states the object of his work.

11. Translate with short notes on words spaced:

(*a*) *συνήκατε ταῦτα πάντα; λέγουσιν αὐτῷ* Ναί. *ὁ δὲ εἶπεν αὐτοῖς Διὰ τοῦτο πᾶς γραμματεὺς μαθητευθεὶς τῇ βασιλείᾳ τῶν οὐρανῶν ὅμοιός ἐστιν ἀνθρώπῳ οἰκοδεσπότῃ ὅστις ἐκβάλλει ἐκ τοῦ θησαυροῦ αὐτοῦ καινὰ καὶ παλαιά.*

(*β*) *εἰδὼς δὲ ὁ Ἰησοῦς ἐν ἑαυτῷ ὅτι γογγύζουσιν περὶ τούτου οἱ μαθηταὶ αὐτοῦ εἶπεν αὐτοῖς* Τοῦτο *ὑμᾶς σκανδαλίζει; ἐὰν οὖν θεωρῆτε τὸν υἱὸν τοῦ ἀνθρώπου ἀναβαίνοντα ὅπου ἦν τὸ πρότερον; τὸ πνεῦμά ἐστιν τὸ ζωοποιοῦν, ἡ σὰρξ οὐκ ὠφελεῖ οὐδέν· τὰ ῥήματα ἃ ἐγὼ λελάληκα ὑμῖν πνεῦμά ἐστιν καὶ ζωή ἐστιν.*

12. Retranslate, correcting the A.V. where necessary:

(*a*) And whosoever shall give to drink unto one of these little ones a cup of cold water only in the name of a disciple, verily I say unto you, he shall in no wise lose his reward.

(*b*) He is like a man which built an house, and digged deep, and laid the foundation on a rock: and when the flood arose, the stream beat vehemently upon that house, and could not shake it: for it was founded upon a rock.

(*c*) This beginning of miracles did Jesus in Cana of Galilee, and manifested forth his glory; and his disciples believed on him.

(*d*) Ye sent unto John, and he bare witness unto the truth. But I receive not testimony from man: but these things I say, that ye might be saved. He was a burning and a shining light: and ye were willing for a season to rejoice in his light.

13. In what connexion do the following words occur, if at all, in the Gospels? *πίστις, ἐλπίς, ἀνάστασις, ζωή, ψυχή, σωτηρία.*

WEDNESDAY, *May* 28, 1884. 1.30 to 4.30.

THE ACTS OF THE APOSTLES, THE EPISTLES, AND THE APOCALYPSE, WITH SPECIAL REFERENCE TO THE EPISTLE TO THE HEBREWS.

A.

1. WHAT should you gather concerning the Presbyterate in the primitive Church from (*a*) the Acts and (*b*) the Pastoral Epistles?

2. Give very briefly the main outline of the Acts of the Apostles, shewing the principles of construction which were present to the writer's mind.

3. Describe *one* of the following places: Ephesus, Antioch in Syria, Cæsarea, geographically and historically.

Or,

State what you know from Scriptural or other sources of Gamaliel, Gallio, Felix, Drusilla, Pudens.

4. Mention the peculiar features of style and subject-matter which characterize respectively the epistles to the Corinthians, Romans, Ephesians.

5. Shew how the literature and past history of the Athenian people gives special significance to St Paul's speech at Athens.

6. Translate the following passages, adding exegetical notes on *three* of them:

(*α*) *ἐγένετο δὲ ἐν τῷ τὸν Ἀπολλὼ εἶναι ἐν Κορίνθῳ Παῦλον διελθόντα τὰ ἀνωτερικὰ μέρη ἐλθεῖν εἰς Ἔφεσον καὶ εὑρεῖν τινας μαθητάς, εἶπέν τε πρὸς αὐτούς Εἰ πνεῦμα ἅγιον ἐλάβετε πιστεύσαντες; οἱ δὲ πρὸς αὐτόν Ἀλλ' οὐδ' εἰ πνεῦμα ἅγιον ἔστιν ἠκούσαμεν. εἶπέν τε Εἰς τί οὖν ἐβαπτίσθητε;*

(*β*) *οἱ δὲ σὺν ἐμοὶ ὄντες τὸ μὲν φῶς ἐθεάσαντο τὴν δὲ φωνὴν οὐκ ἤκουσαν τοῦ λαλοῦντός μοι.*

How does this agree with the words 'hearing a voice, but seeing no man'?

(*γ*) *ἴδε οὖν χρηστότητα καὶ ἀποτομίαν θεοῦ.*

(*δ*) *ἀμεταμέλητα γὰρ τὰ χαρίσματα καὶ ἡ κλῆσις τοῦ θεοῦ.*

(*ε*) *δοκῶ γάρ, ὁ θεὸς ἡμᾶς τοὺς ἀποστόλους ἐσχάτους ἀπέδειξεν ὡς ἐπιθανατίους.*

(*ϛ*) *ἡ ἐμὴ ἀπολογία τοῖς ἐμὲ ἀνακρίνουσίν ἐστιν αὕτη. μὴ οὐκ ἔχομεν ἐξουσίαν φαγεῖν καὶ πιεῖν; μὴ οὐκ ἔχομεν ἐξουσίαν ἀδελφὴν γυναῖκα περιάγειν, ὡς καὶ οἱ λοιποὶ ἀπόστολοι καὶ οἱ ἀδελφοὶ τοῦ κυρίου καὶ Κηφᾶς;*

(*ζ*) *εἰς ἐπίγνωσιν τοῦ μυστηρίου τοῦ θεοῦ, Χριστοῦ, ἐν ᾧ εἰσὶν πάντες οἱ θησαυροὶ τῆς σοφίας καὶ γνώσεως ἀπόκρυφοι.*

(η) ἀλλὰ τότε μὲν οὐκ εἰδότες θεὸν ἐδουλεύσατε τοῖς φύσει μὴ οὖσι θεοῖς· νῦν δὲ γνόντες θεόν, μᾶλλον δὲ γνωσθέντες ὑπὸ θεοῦ, πῶς ἐπιστρέφετε πάλιν ἐπὶ τὰ ἀσθενῆ καὶ πτωχὰ στοιχεῖα οἷς πάλιν ἄνωθεν δουλεῦσαι θέλετε;

(θ) χήρας τίμα τὰς ὄντως χήρας. εἰ δέ τις χήρα τέκνα ἢ ἔκγονα ἔχει, μανθανέτωσαν πρῶτον τὸν ἴδιον οἶκον εὐσεβεῖν καὶ ἀμοιβὰς ἀποδιδόναι τοῖς προγόνοις, τοῦτο γάρ ἐστιν ἀπόδεκτον ἐνώπιον τοῦ θεοῦ.

7. Give the Greek of the following passages:

(a) 'I beseech you therefore, brethren, by the mercies of God, that ye present your bodies a living sacrifice, holy, acceptable unto God, which is your reasonable service. And be not conformed to this world: but be ye transformed by the renewing of your mind, that ye may prove what is that good, and acceptable, and perfect, will of God.'

(b) 'For our conversation is in heaven; from whence also we look for the Saviour, the Lord Jesus Christ: who shall change our vile body, that it may be fashioned like unto his glorious body, according to the working whereby he is able even to subdue all things unto himself.'

(c) 'For the grace of God that bringeth salvation hath appeared to all men, teaching us that, denying ungodliness and worldly lusts, we should live soberly, righteously, and godly, in this present world; looking for that blessed hope, and the glorious appearing, of the great God and our Saviour Jesus Christ, who gave himself for us, that he might redeem us from all iniquity, and purify unto himself a peculiar people, zealous of good works.'

B.

1. Examine how far the theory of Pauline authorship was the cause of the Epistle to the Hebrews being included in the Canon.

2. Translate:

ἀσπάζονταί σε οἱ ἀπὸ Φιλίππων ἐν Χριστῷ, ὅθεν καὶ ἀπέστειλά σε.

Where are these words to be found? How do they illustrate the Epistle to the Hebrews? Quote from the Epistle to show whom the writer was addressing.

3. Analyse briefly the contents of the First Epistle of St John.

For what reasons is it called a "Catholic Epistle"?

4. Estimate the influence of the Christology of the Epistle to the Hebrews upon the teaching of the Church.

5. Translate and explain:

(a) διὸ ἀφέντες τὸν τῆς ἀρχῆς τοῦ χριστοῦ λόγον ἐπὶ τὴν τελειότητα φερώμεθα, μὴ πάλιν θεμέλιον καταβαλλόμενοι μετανοίας ἀπὸ νεκρῶν ἔργων, καὶ πίστεως ἐπὶ θεόν, βαπτισμῶν διδαχὴν ἐπιθέσεώς τε χειρῶν, ἀναστάσεως νεκρῶν καὶ κρίματος αἰωνίου. καὶ τοῦτο ποιήσομεν ἐάνπερ ἐπιτρέπῃ ὁ θεός.

(b) πίστει νοοῦμεν κατηρτίσθαι τοὺς αἰῶνας ῥήματι θεοῦ, εἰς τὸ μὴ ἐκ φαινομένων τὸ βλεπόμενον γεγονέναι.

(c) ἔχομεν θυσιαστήριον ἐξ οὗ φαγεῖν οὐκ ἔχουσιν ἐξουσίαν οἱ τῇ σκηνῇ λατρεύοντες. ὧν γὰρ εἰσφέρεται ζώων τὸ αἷμα περὶ ἁμαρτίας εἰς τὰ ἅγια διὰ τοῦ ἀρχιερέως, τούτων τὰ σώματα κατακαίεται ἔξω τῆς παρεμβολῆς· διὸ καὶ Ἰησοῦς, ἵνα ἁγιάσῃ διὰ τοῦ ἰδίου αἵματος τὸν λαόν, ἔξω τῆς πύλης ἔπαθεν.

(*d*) καὶ ἔχομεν βεβαιότερον τὸν προφητικὸν λόγον, ᾧ καλῶς ποιεῖτε προσέχοντες ὡς λύχνῳ φαίνοντι ἐν αὐχμηρῷ τόπῳ, ἕως οὗ ἡμέρα διαυγάσῃ καὶ φωσφόρος ἀνατείλῃ ἐν ταῖς καρδίαις ὑμῶν· τοῦτο πρῶτον γινώσκοντες ὅτι πᾶσα προφητεία γραφῆς ἰδίας ἐπιλύσεως οὐ γίνεται.

(*e*) οἶδά σου τὰ ἔργα, ὅτι οὔτε ψυχρὸς εἶ οὔτε ζεστός. ὄφελον ψυχρὸς ἦς ἢ ζεστός. οὕτως, ὅτι χλιαρὸς εἶ καὶ οὔτε ζεστὸς οὔτε ψυχρός, μέλλω σε ἐμέσαι ἐκ τοῦ στόματός μου. ὅτι λέγεις ὅτι Πλούσιός εἰμι καὶ πεπλούτηκα καὶ οὐδὲν χρείαν ἔχω, καὶ οὐκ οἶδας ὅτι σὺ εἶ ὁ ταλαίπωρος καὶ ἐλεινὸς καὶ πτωχὸς καὶ τυφλὸς καὶ γυμνός.

6. Discuss the reading in

(*a*) τὸν δὲ βραχύ τι παρ' ἀγγέλους ἠλαττωμένου βλέπομεν Ἰησοῦν διὰ τὸ πάθημα τοῦ θανάτου δόξῃ καὶ τιμῇ ἐστεφανωμένον, ὅπως χάριτι Θεοῦ ὑπὲρ παντὸς γεύσηται θανάτου.

(*b*) καὶ γάρ ἐσμεν εὐηγγελισμένοι, καθάπερ κἀκεῖνοι· ἀλλ' οὐκ ὠφέλησεν ὁ λόγος τῆς ἀκοῆς ἐκείνους, μὴ συγκεκραμένος τῇ πίστει τοῖς ἀκούσασιν.

(*c*) οὐ γὰρ προσεληλύθατε ψηλαφωμένῳ ὄρει, καὶ κεκαυμένῳ πυρί, καὶ γνόφῳ, καὶ σκότῳ, καὶ θυέλλῃ.

7. What is the argument of the following passage?

οὗτός ἐστιν ὁ ἐλθὼν δι' ὕδατος καὶ αἵματος, Ἰησοῦς Χριστός· οὐκ ἐν τῷ ὕδατι μόνον ἀλλ' ἐν τῷ ὕδατι καὶ ἐν τῷ αἵματι· καὶ τὸ πνεῦμά ἐστιν τὸ μαρτυροῦν, ὅτι τὸ πνεῦμά ἐστιν ἡ ἀλήθεια. ὅτι τρεῖς εἰσὶν οἱ μαρτυροῦντες, τὸ πνεῦμα καὶ τὸ ὕδωρ καὶ τὸ αἷμα, καὶ οἱ τρεῖς εἰς τὸ ἕν εἰσιν.

How is it affected by the interpolation?

8. Illustrate the usage of

εὐλάβεια, ἁγιαζόμενοι, ὑπόστασις, κόλασις, ἱλασμός, ὑπομονή, ἀποκάλυψις, οἱ ἡγούμενοι.

9. Translate into the original Greek FIVE of these renderings:

(*a*) nusquam enim angelos apprehendit, sed semen Abrahæ apprehendit.

(*b*) ubi enim testamentum est, mors necesse est intercedat testatoris. Testamentum enim in mortuis confirmatum est, alioquin nondum valet, dum vivit qui testatus est.

(*c*) si quis autem putat se religiosum esse, non refrænans linguam suam, sed seducens cor suum, hujus vana est religio.

(*d*) quales oportet vos esse in sanctis conversationibus et pietatibus, expectantes et properantes in adventum diei Domini.

(*e*) qui enim dicit illi "Ave", communicat operibus ejus malignis.

(*f*) et audivi vocem de cælo, dicentem mihi; Scribe, Beati mortui, qui in Domino moriuntur. Amodo jam dicit Spiritus, ut requiescant a laboribus suis; opera enim illorum sequuntur illos.

THURSDAY, *May* 29, 1884. 9—12.

THE HISTORY OF THE CHURCH TO THE DEATH OF LEO THE GREAT. [SUBJECT FOR SPECIAL STUDY; LACTANTIUS DE MORTIBUS PERSECUTORUM.]

1. WHAT are the chief sources of our information as to the history of the progress of Christianity down to the middle of the second century of our era? Mention some of the incidents in the later years of St Peter and St John which have been handed down to us, and the authorities on which our information rests.

2. Exhibit the characteristics of the struggles which Christianity had to undergo in its effort to uproot the popular worship in the West, (1) among the educated (2) among the ill-educated classes of society.

3. What authorities have we for the fact and details of the persecution under Nero? What belief was there in the early Church as to the reappearance of Nero? On what was it founded?

4. How do you account for the attitude of Marcus Aurelius towards the Church? What notable martyrdoms took place in his time? What reason can you suggest for the omission of all notice of this persecution by Lactantius? Give some account of the "Miracle of the Thundering Legion."

5. Give Lactantius' account of the characters of Diocletian, and of Galerius. What share does he assign to the mother of the latter in the commencement of the "Diocletian persecution"? What do we know from his account as to the character and contents of the Christian Basilica at Nicomedia?

6. Translate TWO of the following passages explaining, with dates, the circumstances to which they refer:

(*a*) Paucis post diebus laureata imago ejus allata est ad malam bestiam. deliberavit diu an susciperet: in eo pæne res fuit ut illam et ipsum qui attulerat exureret, nisi eum amici ab illo furore flexissent, admonentes eum periculi, quod universi milites, quibus invitis ignoti Cæsares erant facti, suscepturi Constantinum fuissent atque ad eum concursuri alacritate summa si venisset armatus. suscepit itaque imaginem admodum invitus atque ipsi purpuram misit, ut ultro ascivisse illum in societatem videretur.

(*b*) Redit ille securus et fit qualis in Syria et in Ægypto fuit. in primis indulgentiam Christianis communi titulo datam tollit, subornatis legationibus civitatum quæ peterent ne intra civitates suas Christianis conventicula exstruere liceret, ut quasi coactus et impulsus facere videretur quod erat sponte facturus. quibus annuens, novo more sacerdotes maximos per singulas civitates singulos ex primoribus fecit.

(*c*) Maximinus ejusmodi votum Jovi vovit ut si victoriam cepisset Christianorum nomen exstingueret funditusque deleret. tunc proxima nocte Licinio quiescenti assistit angelus Dei monens ut ocius surgeret atque oraret Deum summum cum omni exercitu suo; illius fore victoriam si fecisset.

Give the substance of the prayer.

7. Mention the chief Churches of which Irenæus or Eusebius gives the succession of Bishops. What object had the former in his mind when he pressed the importance of this succession? Give some notes as to the growth of the authority of the Church of Rome during these early centuries. What is the language of the Latin version of Irenæus on this subject?

8. Give a brief account of the proceedings of the Council of Nicæa. What were the immediate results of its doctrinal decisions? How do you account for the fact of the reaction which followed? When do you consider the Nicene faith to have become "established"?

9. Give the dates of the birth, accession and death of Julian, and an account of his efforts to reorganize the empire. What were the immunities of the clergy which his legislation abolished?

10. How do you account for the indifference with which the "Second Œcumenical Council" was at first regarded? Give the history of its reception as an Œcumenical Council.

11. Give an account of the more immediate circumstances which led on to the Council of Chalcedon. What part was taken in this Council by the Bishops of the Patriarchate of Alexandria? What part by Leo the Great?

12. Mention some of the more important ecclesiastical questions on which canons were made in the four great Councils? Which of these canons have been universally received? What was Athanasius' attitude in regard to the authority of a Council as such?

13. Give the dates of the captures of Rome by northern tribes before the death of Leo, and an account of the most important ecclesiastical results which ensued.

THURSDAY, *May* 29, 1884. 1.30—4.30.

THE HISTORY OF CHRISTIAN DOCTRINE TO THE CLOSE OF THE COUNCIL OF CHALCEDON, WITH SPECIAL REFERENCE TO THE ANCIENT CREEDS AND OTHER ORIGINAL AUTHORITIES.

1. WHAT were the main principles common to all the Gnostic sects? To what difficulties in the way of the reception of Christianity do they point? What permanent effect on the faith of the Church was produced by Gnosticism?

2. Translate:

(*a*) *Ὁ μὲν γὰρ τοῦ παντὸς δημιουργὸς καὶ παμβασιλεὺς Θεός, ὁ ὑπερέκεινα πάσης οὐσίας καὶ ἀνθρωπίνης ἐπινοίας ὑπάρχων, ἅτε δὴ ἀγαθὸς καὶ ὑπέρκαλος ὤν, διὰ τοῦ ἰδίου Λόγου τοῦ Σωτῆρος ἡμῶν Ἰησοῦ Χριστοῦ τὸ ἀνθρώπινον γένος κατ' ἰδίαν εἰκόνα πεποίηκε.*

(*b*) Id definio quod et omnium conscientia agnoscet: Deum summum esse magnum, in aeternitate constitutum, innatum, infectum, sine initio, sine fine. Hunc enim statum aeternitati censendum, quae summum magnum Deum efficiat, dum hoc est in Deo ipsa atque ita et caetera, ut sit Deus summum magnum et forma, et ratione, et vi, et potestate.

Point out in these two passages the germ of a characteristic divergence of thought between East and West. Does Tertullian in any other passage give more distinct expression to this divergence?

3. Translate:

Ὁπότε οὖν καὶ τὸ κεκραμένον ποτήριον, καὶ ὁ γεγονὼς ἄρτος ἐπιδέχεται τὸν λόγον τοῦ Θεοῦ, καὶ γίνεται ἡ εὐχαριστία σῶμα Χριστοῦ, ἐκ τούτων δὲ αὔξει καὶ συνίσταται ἡ σαρκὸς ἡμῶν ὑπόστασις· πῶς δεκτικὴν μὴ εἶναι λέγουσι τὴν σάρκα τῆς δωρεᾶς τοῦ Θεοῦ, ἥτις ἐστὶ ζωὴ αἰώνιος, τὴν ἀπὸ τοῦ σώματος καὶ αἵματος τοῦ Κυρίου τρεφομένην, καὶ μέλος αὐτοῦ ὑπάρχουσαν;

From what author is this passage taken? Under what difficulty do we labour in discovering the exact views he held? Compare his teaching on the Eucharist with that of Clement of Alexandria.

4. Explain the nature of the question involved in the Novatian controversy, and of the arguments used by the two principal disputants. How far may the controversy be said to have settled the question?

5. Translate:

Quod vero quosdam aut multos movebat de substantia quae Graece *usia* appellabatur, id est, ut expressius intelligatur, homousion, aut quod dicitur homoeusion nullam omnino fieri oportere mentionem, nec quemquam praedicare; ea de causa et ratione quod nec in divinis Scripturis contineatur, et quod super hominis scientiam sit.

From what document are these words taken, what stage of the controversy does it represent, and how was the argument answered?

6. Translate:

Πιστεύομεν εἰς ἕνα μόνον Θεὸν, Πατέρα παντοκράτορα, ἐξ οὗ τὰ πάντα· καὶ εἰς τὸν μονογενῆ Υἱὸν τοῦ Θεοῦ, πρὸ πάσης ἀρχῆς γεννηθέντα ἐκ τοῦ Θεοῦ, δι' οὗ τὰ πάντα ἐγένετο, τὰ ὁρατὰ καὶ τὰ ἀόρατα, γεννήθεντα δὲ μονογενῆ, μόνον ἐκ μόνου τοῦ Πατρὸς, Θεὸν ἐκ Θεοῦ, ὅμοιον τῷ γεννήσαντι αὐτὸν Πατρὶ κατὰ τὰς γραφάς· οὗ τὴν γέννησιν οὐδεὶς γινώσκει, εἰ μὴ μόνος ὁ γεννήσας αὐτὸν Πατήρ. Τοῦτον οἴδαμεν μονογενῆ τοῦ Θεοῦ υἱὸν, πέμποντος τοῦ Πατρὸς παραγενέσθαι ἐκ τῶν οὐρανῶν, ὡς γέγραπται.

Where, when, and by whom, was this creed promulgated? Compare it with the Lucianic creed. What objections were raised against it by Athanasius and the orthodox party?

7. How many creeds does Socrates tell us were put forth by the Arian and Semi-Arian parties between A.D. 325 and A.D. 381? What influence does he shew that this fact had on the ultimate triumph of the Nicene symbol?

8. Define precisely the objects which Athanasius had in view in his resolute determination to maintain the Homoousion.

9. In what light was Marcellus of Ancyra regarded by Athanasius and Basil of Caesarea respectively? How do you account for the support given to Marcellus in the West?

10. Assign (without translating) each of these passages to its respective theological school:

(a) *Ὅταν τοίνυν ἢ ἐν τοῖς ἀποστόλοις, ἢ ὅλως ἐν τοῖς δικαίοις ἐνοικεῖν λέγηται, ὡς ἐν δικαίοις εὐδοκῶν ποιεῖται τὴν ἐνοίκησιν, ὡς ἐναρέτοις κατὰ τὸν τρόπον ἀρεσκόμενος. Ἐν αὐτῷ μέντοι τὴν ἐνοίκησιν οὐχ οὕτω φαμὲν γεγενῆσθαι, μὴ γὰρ ἂν τοσοῦτο μανείημεν ποτέ, ἀλλ' ὡς ἐν Υἱῷ. Οὕτω γὰρ εὐδοκήσας ἐνῴκησεν. Τί δέ ἐστι τὸ ὡς ἐν Υἱῷ; Ὥστε ἐνοικήσας ὅλον μὲν ἑαυτῷ τὸν λαμβανόμενον ἥνωσεν, παρεσκεύασε δὲ αὐτὸν συμμετασχεῖν αὐτῷ πάσης τῆς τιμῆς ἧς αὐτὸς ὁ ἐνοικῶν Υἱὸς ὢν φύσει μετέχει.*

(*b*) Χριστὸς Ἰησοῦς οὐ γυμνὸς καὶ καθ' ἑαυτὸν ὁ ἐκ Θεοῦ νοεῖται Λόγος, ἀλλ' ὅτε προσέλαβε τὸ ἀνθρώπινον ἐνεπλάκη σαρκί· οὕτως ἔχοντα καὶ ὁρώμενον, καὶ ἐν εἴδει τῷ καθ' ἡμᾶς τυγχάνοντα, τοῖς ἁγίοις ἀποστόλοις παρέδειξεν ὁ Πατὴρ, φωνῆς ἄνωθεν ἐκπεποιημένης τοιᾶσδε· Οὗτός ἐστιν ὁ Υἱός μου ὁ ἀγαπητὸς, ἐν ᾧ ηὐδόκησα. Σύνες οὖν ὅπως οὐκ ἐν τούτῳ, φησὶν, ἐστὶν ὁ Υἱός μου, ἵνα μὴ ἀναμέρος ὡς ἕτερος ἐν ἑτέρῳ τυχὸν ἀλλ' εἷς νοῆται καὶ ὁ αὐτὸς καθ' ἕνωσιν οἰκονομικήν.

(*c*) Assumta est de matre Domini natura, non culpa: nec in Domino Jesu Christo, ex utero virginis genito quia nativitas est mirabilis, ideo nostri est natura dissimilis. Qui enim verus est Deus, idem verus est homo, et nullum est in hac unitate mendacium, dum invicem sunt et humilitas hominis et altitudo Deitatis. Sicut enim Deus non mutatur miseratione, ita homo non consumitur dignitate. Agit enim utraque forma cum alterius communione quod proprium est: Verbo scilicet operante quod Verbi est, et carne exequente quod carnis est.

Mention what was the point at issue, and state accurately how the limits of orthodoxy were defined by the fourth general council.

11. 'Quid est autem aliud quod malum dicitur, nisi privatio boni?' 'Ergo quaecumque sunt, bona sunt. Malumque illud quod quaerebam unde esset, non est substantia, quia si substantia esset, bonum esset.' From whose writings are these extracts taken? How far is his view conditioned by his previous history? Compare his theory with other theories on this point.

12. Trace the growth of St Augustine's opinions on the subject of free will and predestination, mentioning the works in which he set them forth.

13. Who was Cassian, and with what doctrines is his name connected? How were they received in the East and West respectively?

14. Neque negandum est defunctorum animas pietate suorum relevari quum pro illis sacrificium mediatoris offertur, vel eleemosynae in ecclesia fiunt. Sed eis haec prosunt qui cum viverent ut haec sibi postea possent prodesse meruerunt. Est enim quidam vivendi modus nec tam bonus ut non requirat ista post mortem, nec tam malus ut non ei prosint ista post mortem.

Point out how far the doctrine contained in this extract is a development of, and how much an addition to, that of earlier times. What shape did the doctrine ultimately assume?

THEOLOGICAL TRIPOS.

PART II.

SECTION I.

FRIDAY, *May* 30, 1884. 9—12.

[*Candidates are requested not to answer more than* **three** *of the first* **four** *questions.*]

ISAIAH.

1. DETERMINE as precisely as possible Isaiah's place in the national life of the chosen people of his time. Compare his position with that of (*a*) Samuel, (*b*) Elijah.

2. Determine from the book of Isaiah and from secular sources what were the characteristics of the Egyptian policy and character in Isaiah's time. Compare Egypt with Assyria in these respects. What light do the monuments and inscriptions throw on the mention made in Isaiah of Sargon, Merodach Baladan, and Cyrus?

3. To what extent may the book of Isaiah be said to add elements to or develop existing elements in the Messianic idea?

4. "Prophecy takes the visible or the temporal subject as the *ὁρμητήριον* of its enlarged revelation; and yet by that subject it governs its course."

Assume the truth of this statement, and discuss its bearing on the authorship of Isaiah xl—lxvi.

5. Point

(*a*) אשירה נא לידידי שירת דודי לכרמו כרם היה לידידי בקרן בן שמן :
ויעזקהו ויסקלהו וטעהו שרק ויבן מגדל בתוכו וגם יקב חצב בו ויקו לעשות
ענבים ויעש באשים : ועתה יושב ירושלם ואיש יהודה שפטו נא ביני ובין כרמי :
מה לעשות עוד לכרמי ולא עשיתי בו מדוע קויתי לעשות ענבים ויעש באשים :
ועתה אודיעה נא אתכם את אשר אני עשה לכרמי הסר משוכתו והיה לבער פרץ
גדרו והיה למרמס : ואשיתהו בתה לא יזמר ולא יעדר ועלה שמיר ושית ועל
העבים אצוה מהמטיר עליו מטר : כי כרם יהוה צבאות בית ישראל ואיש יהודה
נטע שעשועיו ויקו למשפט והנה משפח לצדקה והנה צעקה :

(b) הן לצדק ימלך מלך ולשרים למשפט ישרו: והיה איש כמחבא רוח וסתר זרם כפלגי מים בציון כצל סלע כבד בארץ עיפה: ולא תשעינה עיני ראים ואזני שמעים תקשבנה: ולבב נמהרים יבין לדעת ולשון עלגים תמהר לדבר צחות: לא יקרא עוד לנבל נדיב ולכילי לא יאמר שוע: כי נבל נבלה ידבר ולבו יעשה און לעשות חנף ולדבר אל יהוה תועה להריק נפש רעב ומשקה צמא יחסיר: וכלי כליו רעים הוא זמות יעץ לחבל ענוים באמרי שקר ובדבר אביון משפט:

(c) מי אלה כעב תעופינה וכיונים אל ארבתיהם: כי לי איים יקוו ואניות תרשיש בראשנה להביא בניך מרחוק כספם וזהבם אתם לשם יהוה אלהיך ולקדוש ישראל כי פארך: ובנו בני נכר חומתיך ומלכיהם ישרתונך כי בקצפי הכיתיך וברצוני רחמתיך: ופתחו שעריך תמיד יומם ולילה לא יסגרו להביא אליך חיל גוים ומלכיהם נהוגים: כי הגוי והממלכה אשר לא יעבדוך יאבדו והגוים חרב יחרבו:

6. Give the original Hebrew corresponding to

(*a*) Moreover the Lord spake again unto Ahaz, saying, Ask thee a sign of the Lord thy God; ask it either in the depth, or in the height above. But Ahaz said, I will not ask, neither will I tempt the Lord. And he said, Hear ye now, O house of David; Is it a small thing for you to weary men, but will ye weary my God also? Therefore the Lord himself shall give you a sign; Behold, a virgin shall conceive, and bear a son, and shall call his name Immanuel. Butter and honey shall he eat, that he may know to refuse the evil, and choose the good. For before the child shall know to refuse the evil, and choose the good, the land that thou abhorrest shall be forsaken of both her kings.

(*b*) For the grave cannot praise thee, death can not celebrate thee: they that go down into the pit cannot hope for thy truth. The living, the living, he shall praise thee, as I do this day: the father to the children shall make known thy truth.

(*c*) Surely he hath borne our griefs, and carried our sorrows: yet we did esteem him stricken, smitten of God, and afflicted. But he was wounded for our transgressions, he was bruised for our iniquities: the chastisement of our peace was upon him; and with his stripes we are healed. All we like sheep have gone astray; we have turned every one to his own way; and the Lord hath laid on him the iniquity of us all. He was oppressed, and he was afflicted, yet he opened not his mouth: he is brought as a lamb to the slaughter, and as a sheep before her shearers is dumb, so he openeth not his mouth.

7. Translate with notes grammatical and exegetical:

(a) וְהָאֱלִילִים כָּלִיל יַחֲלֹף׃

(b) וְכִי־אֹמְרוּ אֲלֵיכֶם דְּרֹשׁוּ אֶל־הָאֹבֹת וְאֶל־הַיִּדְּעֹנִים הַמְצַפְצְפִים וְהַמַּהְגִּים הֲלֹא עַם אֱלֹהָיו יִדְרֹשׁ בְּעַד הַחַיִּים אֶל־הַמֵּתִים׃ לְתוֹרָה וְלְתְעוּדָה אִם־לֹא יֹאמְרוּ כַּדָּבָר הַזֶּה אֲשֶׁר אֵין־לוֹ שָׁחַר׃

(c) הֲיִתָּאֵר הַכֶּסֶף עַל הַחֹצֵב בּוֹ אִם־יִתְגַּדַּל הַמַּשֵּׂר עַל־עֹשֵׂהוּ כְּתָנִיף שֵׁבֶט אֶת־מֵרִימָיו כְּמַטֶּה לֹא־עֵץ׃

(d) כִּי כֹה אָמַר יְהוָה אֵלַי אֶסְתָּכְלָה וְאַבִּיטָה בִּמְכוֹנִי בְּתֹךְ צָה עַל־אוֹר כְּעָב טַל בְּתֹךְ קָצִיר׃ כִּי־לִפְנֵי קָצִיר בְּתֶכְפָּח וּכְפֶר נֹבֵל יִהְיֶה נֵצָה וְתָהֹת הַלּוֹלִים בַּמַּזְמֵרוֹת וְאֶת־הַכְּרִיתוֹת הָסִר הַטִּן׃ יַעֲזֹבוּ יַחְדָּו לְעֵט הָרִים וּלְבֵהֶמַת הָאָרֶץ וְהַקַּיִץ עָלָיו הָעַיִט וְכָל־בְּהֵמַת הָאָרֶץ עָלָיו תָּחֹרֶף׃

(e) וְכָפַר בֵּיתְכֶם אִתְּמָר וְיוֹנָתְכֶם אֶת־שְׁאוֹל לֹא תָקוּם שׁוֹט שׁוֹטֵף כִּי יַעֲבֹר וְהָיִתֶם לוֹ לְמִרְמָס׃ מִדֵּי עָבְרוֹ יִקַּח אֶתְכֶם כִּי־בַבֹּקֶר בַּבֹּקֶר יַעֲבֹר יוֹמָם וָלָיְלָה וְהָיָה רַק־זַעֲוָה לְבִין שְׁמוּעָה׃ כִּי־קָצַר הַמִّצָּע מֵהִשְׂתָּרֵעַ וְהַמַּסֵּכָה צָרָה מֵהִתְכַּנֵּס׃ כִּי כְּהַר־פְּרָצִים יָקוּם יְהוָה כְּעֵמֶק בְּגִבְעוֹן יִרְגָּז לַעֲשׂוֹת מַעֲשֵׂהוּ זָר מַעֲשֵׂהוּ וְלַעֲבֹד עֲבֹדָתוֹ נָכְרִיָּה עֲבֹדָתוֹ׃ וְעַתָּה אַל־תִּתְלוֹצָצוּ פֶּן־יֶחְזְקוּ מוֹסְרֵיכֶם כִּי־כָלָה וְנֶחְרָצָה שָׁמַעְתִּי מֵאֵת אֲדֹנָי יְהוִה צְבָאוֹת עַל־כָּל־הָאָרֶץ׃

(f) קָרְבוּ רִבְכֶם יֹאמַר יְהוָה הִגִּישׁוּ עֲצֻמוֹתֵיכֶם יֹאמַר מֶלֶךְ יַעֲקֹב׃ יַגִּישׁוּ וְיַגִּידוּ לָנוּ אֵת אֲשֶׁר תִּקְרֶינָה הָרִאשֹׁנוֹת מָה הֵנָּה הִגִּידוּ נָשִׂימָה לִבֵּנוּ וְנֵדְעָה אַחֲרִיתָן אוֹ הַבָּאוֹת הַשְׁמִיעוּנוּ׃ הַגִּידוּ הָאֹתִיּוֹת לְאָחוֹר וְנֵדְעָה כִּי אֱלֹהִים אַתֶּם אַף תֵּיטִיבוּ וְתֵרֵעוּ וְנִרְאֶה יַחְדָּו׃ הֵן־אַתֶּם מֵאַיִן וּפָעֳלְכֶם מֵאַפֶס תֹּעֵבָה יִבְחַר בָּכֶם׃

(g) לַמִּצְעָר יְרֻשׁוּ עַם־קָדְשֶׁךָ צָרֵינוּ בּוֹסְסוּ מִקְדָּשֶׁךָ : הָיִינוּ מֵעוֹלָם לֹא־
מָשַׁלְתָּ בָּם לֹא־נִקְרָא שִׁמְךָ עֲלֵיהֶם לוּא־קָרַעְתָּ שָׁמַיִם יָרַדְתָּ מִפָּנֶיךָ הָרִים נָזֹלוּ :
כִּקְדֹחַ אֵשׁ הַמָּסִים מַיִם תִּבְעֶה־אֵשׁ לְהוֹדִיעַ שִׁמְךָ לְצָרֶיךָ מִפָּנֶיךָ גּוֹיִם יִרְגָּזוּ :
בַּעֲשׂוֹתְךָ נוֹרָאוֹת לֹא נְקַוֶּה יָרַדְתָּ מִפָּנֶיךָ הָרִים נָזֹלוּ : וּמֵעוֹלָם לֹא־שָׁמְעוּ לֹא
הֶאֱזִינוּ עַיִן לֹא־רָאָתָה אֱלֹהִים זוּלָתְךָ יַעֲשֶׂה לִמְחַכֵּה־לוֹ : פָּגַעְתָּ אֶת־שָׂשׂ וְעֹשֵׂה
צֶדֶק בְּדַרְכֶיךָ יִזְכְּרוּךָ הֵן־אַתָּה קָצַפְתָּ וַנֶּחֱטָא בָּהֶם עוֹלָם וְנִוָּשֵׁעַ :

FRIDAY, *May* 30, 1884. 1.30—4.30.

A.

Candidates are requested not to answer more than two *out of the first* three *questions.*

PSALMS. BOOK I.

1. DISCUSS the date and authorship of two Psalms in this Book: (1) a Psalm of David, (2) a Psalm thought to be later than David.

Give very carefully the evidence on which you form your opinion, and also state the nature of the conclusion at which you arrive, whether a possibility, probability, or certainty.

2. What do you consider to be the general character of the LXX. translation of the Psalms? Give some examples of its influence on the Prayer-Book Version of the Psalter, and state how that influence was exerted. Give three or four important passages in which the LXX. differs from our Hebrew Text.

3. Assuming that the first book of the Psalter is of the time of David, compare the idea you get from it of the moral, religious and political state of the chosen people with that which you get from the books of Samuel. Compare also the David of the Psalms with the David of the history.

4. Translate with notes:

(a) בְּגַאֲוַת רָשָׁע יִדְלַק עָנִי יִתָּפְשׂוּ בְּמִזְמוֹת זוּ חָשָׁבוּ : כִּי־הִלֵּל רָשָׁע
עַל־תַּאֲוַת נַפְשׁוֹ וּבֹצֵעַ בֵּרַךְ נִאֵץ יְהוָה : רָשָׁע כְּגֹבַהּ אַפּוֹ בַּל־יִדְרֹשׁ אֵין אֱלֹהִים
כָּל־מְזִמּוֹתָיו : יָחִילוּ דְרָכָו בְּכָל־עֵת מָרוֹם מִשְׁפָּטֶיךָ מִנֶּגְדּוֹ כָּל־צוֹרְרָיו יָפִיחַ בָּהֶם :
אָמַר בְּלִבּוֹ בַּל־אֶמּוֹט לְדֹר וָדֹר אֲשֶׁר לֹא בְרָע :

(b) יִרְבּוּ עַצְּבוֹתָם אַחֵר מָהָרוּ בַּל־אַסִּיךְ נִסְכֵּיהֶם מִדָּם וּבַל־אֶשָּׂא אֶת־
שְׁמוֹתָם עַל־שְׂפָתָי :

(c) שָׁמְרַנִי כְּאִישׁוֹן בַּת־עָיִן בְּצֵל כְּנָפֶיךָ תַּסְתִּירֵנִי׃ מִפְּנֵי רְשָׁעִים זוּ שַׁדּוּנִי אֹיְבַי בְּנֶפֶשׁ יַקִּיפוּ עָלָי׃ חֶלְבָּמוֹ סָגְרוּ פִּימוֹ דִּבְּרוּ בְגֵאוּת׃ אַשֻּׁרֵנוּ עַתָּה סְבָבוּנִי עֵינֵיהֶם יָשִׁיתוּ לִנְטוֹת בָּאָרֶץ׃

(d) זֶה דּוֹר דֹּרְשָׁו מְבַקְשֵׁי פָנֶיךָ יַעֲקֹב סֶלָה׃

(e) עַל־זֹאת יִתְפַּלֵּל כָּל־חָסִיד אֵלֶיךָ לְעֵת מְצֹא רַק לְשֶׁטֶף מַיִם רַבִּים אֵלָיו לֹא יַגִּיעוּ׃ אַתָּה סֵתֶר לִי מִצַּר תִּצְּרֵנִי רָנֵי פַלֵּט תְּסוֹבְבֵנִי סֶלָה׃ אַשְׂכִּילְךָ וְאוֹרְךָ בְּדֶרֶךְ־זוּ תֵלֵךְ אִיעֲצָה עָלֶיךָ עֵינִי׃ אַל־תִּהְיוּ כְּסוּס כְּפֶרֶד אֵין הָבִין בְּמֶתֶג־וָרֶסֶן עָדְיוֹ לִבְלוֹם בַּל קְרוֹב אֵלֶיךָ׃

(f) כִּי־הָחֲלִיק אֵלָיו בְּעֵינָיו לִמְצֹא עֲוֹנוֹ לִשְׂנֹא׃

(g) הוֹדִיעֵנִי יְהוָה קִצִּי וּמִדַּת יָמַי מַה־הִיא אֵדְעָה מָה־חָדֵל אָנִי׃ הִנֵּה טְפָחוֹת נָתַתָּה יָמַי וְחֶלְדִּי כְּאַיִן נֶגְדֶּךָ אַךְ כָּל־הֶבֶל כָּל־אָדָם נִצָּב׃ סֶלָה׃

5. Write notes on the following:

יָשָׁר יָחֲזוּ פָנֵימוֹ, נַשְׁקוּ־בַר, רִגּוּ, קָו, חָסִיד, עֹרֶף, נֶפֶשׁ

6. Discuss the following renderings of the LXX.

(a) *υἱοὶ ἀνθρώπων, ἕως πότε βαρυκάρδιοι; ἵνα τί ἀγαπᾶτε ματαιότητα καὶ ζητεῖτε ψεῦδος; διάψαλμα.*

(b) *δικαία ἡ βοήθειά μου παρὰ τοῦ θεοῦ τοῦ σώζοντος τοὺς εὐθεῖς τῇ καρδίᾳ. ὁ θεὸς κριτὴς δίκαιος καὶ ἰσχυρὸς καὶ μακρόθυμος, μὴ ὀργὴν ἐπάγων καθ' ἑκάστην ἡμέραν.*

(c) *εὐηρέστησα ἐν τῇ ἀληθείᾳ σου.*

(d) *ἐστράφην εἰς ταλαιπωρίαν ἐν τῷ ἐμπαγῆναι ἄκανθαν.*

7. Give the original Hebrew corresponding to the following:

(a) All they that see me laugh me to scorn: they shoot out the lip, they shake the head, saying, He trusted on the LORD that he would deliver him: let him deliver him, seeing he delighted in him. But thou art he that took me out of the womb: thou didst make me hope when I was upon my mother's breasts.

(b) Day unto day uttereth speech, and night unto night sheweth knowledge. There is no speech nor language, where their voice is not heard. Their line is gone out through all the earth, and their words to the end of the world. In them hath he set a tabernacle for the sun.

8. Point

תרחיב צעדי תחתי ולא מעדו קרסלי : ארדוף אויבי ואשיגם ולא אשוב
עד כלותם : אמחצם ולא יכלו קום יפלו תחת רגלי : ותאזרני חיל למלחמה
תכריע קמי תחתי : ואיבי נתתה לי ערף ומשנאי אצמיתם : ישועו ואין מושיע
על יהוה ולא ענם : ואשחקם כעפר על פני רוח כטיט חוצות אריקם : תפלטני
מריבי עם תשימני לראש גוים עם לא ידעתי יעבדוני : לשמע אזן ישמעו לי
בני נכר יכחשו לי : בני נכר יבלו ויחרגו ממסגרותיהם :

Add the important various readings of 2 Samuel xxii.

B.

[*Candidates are requested not to answer more than two out of the first three questions.*]

HAGGAI, ZECHARIAH, MALACHI.

1. Compare carefully the Post-exilic with the Hezekianic prophecy in (*a*) style and language and imagery, (*b*) subject-matter.

2. Discuss fully the question of the authorship of Zechariah ix—xiv.

3. What views do we find in these books concerning (*a*) Jewish fasting, (*b*) the house of David, (*c*) eschatology?

4. Translate with short notes:

(*a*) זְרַעְתֶּם הַרְבֵּה וְהָבֵא מְעָט אָכוֹל וְאֵין לְשָׂבְעָה שָׁתוֹ וְאֵין לְשָׁכְרָה לָבוּשׁ
וְאֵין לְחֹם לוֹ וְהַמִּשְׂתַּכֵּר מִשְׂתַּכֵּר אֶל־צְרוֹר נָקוּב :

(*b*) מִהְיוֹתָם בָּא אֶל־עֲרֵמַת עֶשְׂרִים וְהָיְתָה עֲשָׂרָה בָּא אֶל־הַיֶּקֶב לַחְשֹׂף
חֲמִשִּׁים פּוּרָה וְהָיְתָה עֶשְׂרִים :

(*c*) הוֹי צִיּוֹן הִמָּלְטִי יוֹשֶׁבֶת בַּת־בָּבֶל : כִּי כֹה אָמַר יְהוָה צְבָאוֹת אַחַר
כָּבוֹד שְׁלָחַנִי אֶל־הַגּוֹיִם הַשֹּׁלְלִים אֶתְכֶם כִּי הַנֹּגֵעַ בָּכֶם נֹגֵעַ בְּבָבַת עֵינוֹ :

(*d*) מִי־אַתָּה הַר־הַגָּדוֹל לְפְנֵי זְרֻבָּבֶל לְמִישׁוֹר וְהוֹצִיא אֶת־הָאֶבֶן הָרֹאשָׁה
תְּשֻׁאוֹת חֵן חֵן לָהּ :

(*e*) וְעָבַר בַּיָּם צָרָה וְהִכָּה בַיָּם גַּלִּים וְהֹבִישׁוּ כָּל מְצוּלוֹת יְאוֹר וְהוּרַד
גְּאוֹן אַשּׁוּר וְשֵׁבֶט מִצְרַיִם יָסוּר :

(f) וְהָיָה בַּיּוֹם הַהוּא לֹא־יִהְיֶה אוֹר יְקָרוֹת יִקְפָּאוּן׃

° וקפאון קר׳

(g) וַאֲמַרְתֶּם הִנֵּה מַתְּלָאָה וְהִפַּחְתֶּם אוֹתוֹ אָמַר יְהוָה צְבָאוֹת וְהֲבֵאתֶם גָּזוּל וְאֶת־הַפִּסֵּחַ וְאֶת־הַחוֹלָה וַהֲבֵאתֶם אֶת־הַמִּנְחָה הַאֶרְצֶה אוֹתָהּ מִיֶּדְכֶם אָמַר יְהוָה׃ וְאָרוּר נוֹכֵל וְיֵשׁ בְּעֶדְרוֹ זָכָר וְנֹדֵר וְזֹבֵחַ מָשְׁחָת לַאדֹנָי כִּי מֶלֶךְ גָּדוֹל אָנִי אָמַר יְהוָה צְבָאוֹת וּשְׁמִי נוֹרָא בַגּוֹיִם׃

5. Comment on the following renderings, giving the original where possible:

(1) *καὶ ἐπάξω ῥόμφαιαν*, (2) *ἀνὰ μέσον τῶν ὄρεων τῶν κατασκίων*, (3) *ἐξεγήγερται ἐκ νεφελῶν ἁγίων*, (4) *ἰδοὺ δρέπανον πετόμενον*, (5) *καὶ σκέψομαι εἰ δοκίμιόν ἐστι· κάθες αὐτὸ εἰς τὸ χωνευτήριον*, (6) *ὡς πρόθυρα σαλευόμενα*, (7) *καὶ ταῦτα ἃ ἐμίσουν ἐποιεῖτε*, (8) *καὶ νῦν μακαρίζομεν ἀλλοτρίους*.

6. Write notes upon

(*a*) 'aspicient ad me quem confixerunt.'

(*b*) *οὐκ ἄλλος ἐποίησεν; καὶ ὑπολεῖμμα πνεύματος αὐτοῦ.*

(*c*) the name 'Malachi.'

7. Translate and comment on the use of

עֵר וְעָנָה, פִּי שְׁנַיִם, הוֹשְׁבוֹתַיִם, תַּנּוֹת, אֲסָעֲרֵם, מַהְלְכִים, פַּחַת.

ἀνεμοφθορία, κατακάρπως, ἄνδρες τερατόσκοποι, οἱ ἀποφθεγγόμενοι, πτερνίζειν.

8. Point and explain the grammar of

(*a*) חעת לכם אתם לשבת בבתיכם ספונים והבית הזה חרב׃

(*b*) את הדבר אשר כרתי אתכם בצאתכם ממצרים ורוחי עמדת בתוככם אל תיראו׃

(*c*) אמר אל כל עם הארץ ואל הכהנים לאמר כי צמתם וספוד בחמישי ובשביעי וזה שבעים שנה הצום צמתני אני׃

(*d*) וחניתי לביתי מצבה מעבר ומשב ולא יעבר עליהם עוד נגש כי עתה ראיתי בעיני׃

9. Retranslate

For, behold, the day cometh, that shall burn as an oven; and all the proud, yea, and all that do wickedly, shall be stubble: and the day that cometh shall burn them up, saith the Lord of hosts, that it shall leave them neither root nor branch. But unto you that fear my name shall the Sun of righteousness arise with healing in his wings; and ye shall go forth, and grow up as calves of the stall. And ye shall tread down the wicked; for they shall be ashes under the soles of your feet in the day that I shall do this, saith the Lord of hosts.

SATURDAY, *May* 31, 1884. 9—12.

OLD TESTAMENT (HEBREW) GENERAL PAPER.

1. TRANSLATE *four* of the following passages, commenting on the words and phrases between asterisks:

(*a*) וַיִּחַר לְיַעֲקֹב וַיְרֵב בְּלָבָן וַיַּעַן יַעֲקֹב וַיֹּאמֶר לְלָבָן מַה־פִּשְׁעִי מַה חַטָּאתִי
כִּי דָלַקְתָּ אַחֲרָי׃ כִּי־מִשַּׁשְׁתָּ אֶת־כָּל־כֵּלַי מַה־מָּצָאתָ מִכֹּל כְּלֵי־בֵיתֶךָ שִׂים כֹּה
נֶגֶד אַחַי וְאַחֶיךָ וְיוֹכִיחוּ בֵּין שְׁנֵינוּ׃ זֶה עֶשְׂרִים שָׁנָה אָנֹכִי עִמָּךְ רְחֵלֶיךָ וְעִזֶּיךָ
לֹא שִׁכֵּלוּ וְאֵילֵי צֹאנְךָ לֹא אָכָלְתִּי׃ טְרֵפָה לֹא־הֵבֵאתִי אֵלֶיךָ אָנֹכִי *אֲחַטֶּנָּה*
מִיָּדִי תְּבַקְשֶׁנָּה *גְּנֻבְתִּי* יוֹם וּגְנֻבְתִּי לָיְלָה׃ הָיִיתִי בַיּוֹם אֲכָלַנִי חֹרֶב וְקֶרַח
בַּלָּיְלָה וַתִּדַּד שְׁנָתִי מֵעֵינָי׃ זֶה־לִּי עֶשְׂרִים שָׁנָה בְּבֵיתֶךָ עֲבַדְתִּיךָ אַרְבַּע־עֶשְׂרֵה
שָׁנָה בִּשְׁתֵּי בְנֹתֶיךָ וְשֵׁשׁ שָׁנִים בְּצֹאנֶךָ וַתַּחֲלֵף אֶת־מַשְׂכֻּרְתִּי עֲשֶׂרֶת מֹנִים׃ לוּלֵי
אֱלֹהֵי אָבִי אֱלֹהֵי אַבְרָהָם וּפַחַד יִצְחָק הָיָה לִי כִּי עַתָּה רֵיקָם שִׁלַּחְתָּנִי אֶת־עָנְיִי
וְאֶת־יְגִיעַ כַּפַּי רָאָה אֱלֹהִים וַיּוֹכַח אָמֶשׁ׃

(*b*) אָדָם יְלוּד אִשָּׁה קְצַר יָמִים וּשְׂבַע־רֹגֶז׃ כְּצִיץ *יָצָא וַיִּמָּל* וַיִּבְרַח כַּצֵּל
וְלֹא יַעֲמוֹד׃ אַף־עַל־זֶה פָּקַחְתָּ עֵינֶךָ וְאֹתִי תָּבִיא בְמִשְׁפָּט עִמָּךְ׃ *מִי־יִתֵּן* טָהוֹר
מִטֻּמְאָה לֹא אָחָד׃ אִם־חֲרוּצִים יָמָיו מִסְפַּר־חֳדָשָׁיו אִתָּךְ חֹקֵו עָשִׂיתָ וְלֹא יַעֲבֹר׃
שְׁעֵה מֵעָלָיו וְיֶחְדָּל עַד־יִרְצֶה כְּשָׂכִיר יוֹמוֹ׃ כִּי יֵשׁ לָעֵץ תִּקְוָה אִם־יִכָּרֵת וְעוֹד
יַחֲלִיף וְיוֹנַקְתּוֹ לֹא תֶחְדָּל׃ אִם־יַזְקִין בָּאָרֶץ שָׁרְשוֹ וּבֶעָפָר יָמוּת גִּזְעוֹ׃ מֵרֵיחַ
מַיִם יַפְרִחַ וְעָשָׂה קָצִיר כְּמוֹ־נָטַע׃ וְגֶבֶר יָמוּת וַיֶּחֱלָשׁ יִגְוַע אָדָם וְאַיּוֹ׃ *אָזְלוּ*־מַיִם
מִנִּי־יָם וְנָהָר יֶחֱרַב וְיָבֵשׁ׃ וְאִישׁ שָׁכַב וְלֹא־יָקוּם עַד־בְּלִתִּי שָׁמַיִם לֹא יָקִיצוּ וְלֹא
יֵעוֹרוּ מִשְּׁנָתָם׃

(c) אֵיכָה יוּעַם זָהָב יִשְׁנָא הַכֶּתֶם הַטּוֹב תִּשְׁתַּפַּכְנָה אַבְנֵי־קֹדֶשׁ בְּרֹאשׁ כָּל־
חוּצוֹת : *בְּנֵי צִיּוֹן הַיְקָרִים הַמְסֻלָּאִים בַּפָּז* אֵיכָה נֶחְשְׁבוּ לְנִבְלֵי־חֶרֶשׂ מַעֲשֵׂה יְדֵי
יוֹצֵר : גַּם־תַּנִּין חָלְצוּ שַׁד הֵנִיקוּ גּוּרֵיהֶן בַּת־עַמִּי לְאַכְזָר כַּיְּעֵנִים בַּמִּדְבָּר : דָּבַק
לְשׁוֹן יוֹנֵק אֶל־חִכּוֹ בַּצָּמָא עוֹלָלִים שְׁאֲלוּ לֶחֶם פֹּרֵשׂ אֵין לָהֶם : הָאֹכְלִים לְמַעֲדַנִּים
נָשַׁמּוּ בַּחוּצוֹת הָאֲמֻנִים עֲלֵי תוֹלָע חִבְּקוּ אַשְׁפָּתוֹת : וַיִּגְדַּל עֲוֹן בַּת־עַמִּי מֵחַטַּאת
סְדֹם הַהֲפוּכָה כְּמוֹ־רָגַע וְלֹא־חָלוּ בָהּ יָדַיִם : זַכּוּ נְזִירֶיהָ מִשָּׁלֶג צָחוּ מֵחָלָב
אָדְמוּ עֶצֶם מִפְּנִינִים סַפִּיר גִּזְרָתָם : חָשַׁךְ מִשְּׁחוֹר תָּאֳרָם לֹא נִכְּרוּ בַּחוּצוֹת צָפַד
עוֹרָם עַל־עַצְמָם יָבֵשׁ הָיָה כָעֵץ :

(d) הוֹי מוֹרָאָה וְנִבְאָלָה הָעִיר הַיּוֹנָה : לֹא שָׁמְעָה בְּקוֹל לֹא לָקְחָה
מוּסָר בַּיהוָה לֹא בָטְחָה אֶל־אֱלֹהֶיהָ לֹא קָרֵבָה : שָׂרֶיהָ בְּקִרְבָּהּ אֲרָיוֹת שֹׁאֲגִים
שֹׁפְטֶיהָ זְאֵבֵי עָרֶב לֹא גָרְמוּ לַבֹּקֶר : נְבִיאֶיהָ פּוֹחֲזִים אַנְשֵׁי בֹגְדוֹת כֹּהֲנֶיהָ חִלְּלוּ־
קֹדֶשׁ חָמְסוּ *תּוֹרָה* : יְהוָה צַדִּיק בְּקִרְבָּהּ לֹא יַעֲשֶׂה עַוְלָה בַּבֹּקֶר בַּבֹּקֶר מִשְׁפָּטוֹ
יִתֵּן לָאוֹר לֹא נֶעְדָּר וְלֹא־יוֹדֵעַ עָוֶל בֹּשֶׁת : הִכְרַתִּי גוֹיִם נָשַׁמּוּ פִּנּוֹתָם הֶחֱרַבְתִּי
חוּצוֹתָם מִבְּלִי עוֹבֵר נִצְּדוּ עָרֵיהֶם מִבְּלִי־אִישׁ מֵאֵין יוֹשֵׁב : אָמַרְתִּי אַךְ־תִּירְאִי
אוֹתִי תִּקְחִי מוּסָר וְלֹא־יִכָּרֵת מְעוֹנָהּ כֹּל אֲשֶׁר־פָּקַדְתִּי עָלֶיהָ אָכֵן הִשְׁכִּימוּ הִשְׁחִיתוּ
כֹּל עֲלִילוֹתָם :

(e) מִזְמוֹר לְדָוִד יְהוָה קְרָאתִיךָ חוּשָׁה לִּי הַאֲזִינָה קוֹלִי בְּקָרְאִי־לָךְ :
תִּכּוֹן תְּפִלָּתִי קְטֹרֶת לְפָנֶיךָ מַשְׂאַת כַּפַּי מִנְחַת־עָרֶב : שִׁיתָה יְהוָה שָׁמְרָה לְפִי
נְצָרָה עַל־דַּל שְׂפָתָי : אַל־תַּט־לִבִּי לְדָבָר רָע לְהִתְעוֹלֵל עֲלִלוֹת בְּרָשָׁע אֶת־
אִישִׁים פֹּעֲלֵי־אָוֶן וּבַל־אֶלְחַם בְּמַנְעַמֵּיהֶם : יַהֲלֻמֵנִי צַדִּיק חָסֶד וְיוֹכִיחֵנִי שֶׁמֶן רֹאשׁ
אַל־*יָנִי* רֹאשִׁי כִּי־עוֹד וּתְפִלָּתִי *בְּרָעוֹתֵיהֶם* : נִשְׁמְטוּ בִידֵי־סֶלַע שֹׁפְטֵיהֶם וְשָׁמְעוּ
אֲמָרַי כִּי נָעֵמוּ : כְּמוֹ פֹלֵחַ וּבֹקֵעַ בָּאָרֶץ נִפְזְרוּ עַצְמֹתֵינוּ לְפִי שְׁאוֹל : כִּי אֵלֶיךָ
יְהוָה אֲדֹנָי עֵינָי בְּכָה חָסִיתִי אַל־תְּעַר נַפְשִׁי : שָׁמְרֵנִי מִידֵי פַח יָקְשׁוּ לִי
וּמִקְשׁוֹת פֹּעֲלֵי אָוֶן : יִפְּלוּ בְּמִכְמֹרָיו רְשָׁעִים יַחַד אָנֹכִי עַד־אֶעֱבוֹר :

2. Point the following passages, marking methegh, ethnach and silluk, and indicating wherever the accent falls on the penultimate syllable:

(a) ויאמר בלעם אל בלק בנה לי בזה שבעה מזבחת והכן לי בזה שבעה פרים ושבעה אילים: ויעש בלק כאשר דבר בלעם ויעל בלק ובלעם פר ואיל במזבח: ויאמר בלעם לבלק התיצב על עלתך ואלכה אולי יקרה יהוה לקראתי ודבר מה יראני והגדתי לך וילך שפי: ויקר אלהים אל בלעם ויאמר אליו את שבעת המזבחת ערכתי ואעל פר ואיל במזבח: וישם יהוה דבר בפי בלעם ויאמר שוב אל בלק וכה תדבר: וישב אליו והנה נצב על עלתו הוא וכל שרי מואב: וישא משלו ויאמר מן ארם ינחני בלק מלך מואב מהרי קדם לכה ארה לי יעקב ולכה זעמה ישראל: מה אקב לא קבה אל ומה אזעם לא זעם יהוה: כי מראש צרים אראנו ומגבעות אשורנו הן עם לבדד ישכן ובגוים לא יתחשב: מי מנה עפר יעקב ומספר את רבע ישראל תמת נפשי מות ישרים ותהי אחריתי כמהו:

(b) אשת חיל מי ימצא ורחק מפנינים מכרה: בטח בה לב בעלה ושלל לא יחסר: גמלתהו טוב ולא רע כל ימי חייה: דרשה צמר ופשתים ותעש בחפץ כפיה: היתה כאניות סוחר ממרחק תביא לחמה: ותקם בעוד לילה ותתן טרף לביתה וחק לנערתיה: זממה שדה ותקחהו מפרי כפיה נטע כרם: חגרה בעוז מתניה ותאמץ זרועתיה: טעמה כי טוב סחרה לא יכבה בליל נרה: ידיה שלחה בכישור וכפיה תמכו פלך: כפה פרשה לעני וידיה שלחה לאביון: לא תירא לביתה משלג כי כל ביתה לבש שנים: מרבדים עשתה לה שש וארגמן לבושה: נודע בשערים בעלה בשבתו עם זקני ארץ: סדין עשתה ותמכר וחגור נתנה לכנעני: עוז והדר לבושה ותשחק ליום אחרון: פיה פתחה בחכמה ותורת חסד על לשונה: צופיה הליכות ביתה ולחם עצלות לא תאכל: קמו בניה ויאשרוה בעלה ויהללה: רבות בנות עשו חיל ואת עלית על כלנה: שקר החן והבל היפי אשה יראת יהוה היא תתהלל: תנו לה מפרי ידיה ויהללוה בשערים מעשיה:

3. Translate into pointed biblical HEBREW:

At last they espied a Shining One coming towards them with a whip of small cord in his hand. When he was come to the place where they were, he asked them whence they came, and what they did there. They told him that they were poor pilgrims going to Zion, but were led out of their way by a black man, clothed in white, who bid us, said they, follow him, for he was going thither too. Then said he with the whip, It is Flatterer, a false apostle, that hath transformed himself into an angel of light. So he rent the net, and let the men out. Then said he to them, Follow me, that I may set you in your way again. So he led them back to the way which they had left to follow the Flatterer. Then he asked them, saying, Where did you lie the last night? They said, With the Shepherds, upon the Delectable Mountains. He asked them then, if they had not of those Shepherds a note of direction for the way. They answered, Yes. But did you, said he, when you were at a stand, pluck out and read your note? They answered, No. He asked them, Why? They said, they forgot. He asked, moreover, if the Shepherds did not bid them beware of the Flatterer. They answered, Yes, but we did not imagine, said they, that this fine-spoken man had been he. Then I saw in my dream, that he commanded them to lie down; which, when they did, he chastised them sore, to teach them the good way wherein they should walk; and as he chastised them he said, "As many as I love, I rebuke and chasten; be zealous, therefore, and repent."

SECTION II.

SATURDAY, *May* 31, 1884. 1.30—4.30.

THE GOSPEL OF ST JOHN WITH ORIGEN, TOM. XX.: CYRIL. ALEX. ON CHAPTERS II. III.: AUGUSTINE, TRACT. 55—111.

A.

1. INVESTIGATE the bearing of John xix. 35 on the question of the authorship of the Fourth Gospel.

2. What reasons are there for identifying the "disciple whom Jesus loved" with the Apostle John? State and examine the objections which have been made to this identification.

3. Quote the words in which the author of the Fourth Gospel defines the object for which he wrote it, and examine how far this definition harmonizes with the accounts given by early tradition as to the occasion and date of its composition.

4. Compare as to form and substance the teaching of the Gospel with that of the Epistles of St John, *either* (*a*) on the person of the Lord, *or* (*b*) on the Holy Spirit.

5. Explain the connexion of thought in each of the following passages:

(*a*) οὗτος ἦλθε πρὸς τὸν Ἰησοῦν νυκτός, καὶ εἶπεν αὐτῷ, "Ῥαββί, οἴδαμεν ὅτι ἀπὸ Θεοῦ ἐλήλυθας διδάσκαλος· οὐδεὶς γὰρ ταῦτα τὰ σημεῖα δύναται ποιεῖν ἃ σὺ ποιεῖς, ἐὰν μὴ ᾖ ὁ Θεὸς μετ' αὐτοῦ." Ἀπεκρίθη ὁ Ἰησοῦς καὶ εἶπεν αὐτῷ, "Ἀμὴν ἀμὴν λέγω σοι, ἐὰν μή τις γεννηθῇ ἄνωθεν, οὐ δύναται ἰδεῖν τὴν βασιλείαν τοῦ Θεοῦ."

(*b*) λέγει πρὸς αὐτὸν ἡ γυνή, "Κύριε, δός μοι τοῦτο τὸ ὕδωρ, ἵνα μὴ διψῶ, μηδὲ ἔρχωμαι ἐνθάδε ἀντλεῖν." Λέγει αὐτῇ ὁ Ἰησοῦς, "Ὕπαγε, φώνησον τὸν ἄνδρα σοῦ, καὶ ἐλθὲ ἐνθάδε."

(*c*) ἀπεκρίθη αὐτοῖς ὁ Ἰησοῦς καὶ εἶπεν, "Ἡ ἐμὴ διδαχὴ οὐκ ἔστιν ἐμή, ἀλλὰ τοῦ πέμψαντός με· ἐάν τις θέλῃ τὸ θέλημα αὐτοῦ ποιεῖν γνώσεται περὶ τῆς διδαχῆς, πότερον ἐκ τοῦ Θεοῦ ἐστιν, ἢ ἐγὼ ἀπ' ἐμαυτοῦ λαλῶ."

(*d*) ἀπεκρίθη αὐτοῖς ὁ Ἰησοῦς, "Ἀμὴν ἀμὴν λέγω ὑμῖν, ὅτι πᾶς ὁ ποιῶν τὴν ἁμαρτίαν, δοῦλός ἐστι τῆς ἁμαρτίας. ὁ δὲ δοῦλος οὐ μένει ἐν τῇ οἰκίᾳ εἰς τὸν αἰῶνα· ὁ υἱὸς μένει εἰς τὸν αἰῶνα. ἐὰν οὖν ὁ υἱὸς ὑμᾶς ἐλευθερώσῃ, ὄντως ἐλεύθεροι ἔσεσθε."

(*e*) καὶ ἐλθὼν ἐκεῖνος ἐλέγξει τὸν κόσμον περὶ ἁμαρτίας καὶ περὶ δικαιοσύνης καὶ περὶ κρίσεως. περὶ ἁμαρτίας μέν, ὅτι οὐ πιστεύουσιν εἰς ἐμέ· περὶ δικαιοσύνης δέ, ὅτι πρὸς τὸν πατέρα μου ὑπάγω, καὶ οὐκ ἔτι θεωρεῖτέ με. περὶ δὲ κρίσεως, ὅτι ὁ ἄρχων τοῦ κόσμου τούτου κέκριται.

6. Retranslate the following passages into the original Greek, noticing defects in the English renderings:

(*a*) All that the Father giveth me shall come to me; and him that cometh to me I will in no wise cast out.

(*b*) I am the good shepherd: the good shepherd giveth his life for the sheep.

(*c*) Jesus answered and said unto him, What I do thou knowest not now; but thou shalt know hereafter.

(*d*) A little while, and ye shall not see me: and again, a little while, and ye shall see me, because I go to the Father.

(*e*) Then said Jesus to them again, Peace be unto you: as my Father hath sent me, even so send I you.

7. State and (if necessary) discuss the meaning of each of the following terms, as used in St John's Gospel:

χωρεῖν—ἐπίγειος—ἐλέγχειν—ἐμβριμᾶσθαι—γλωσσόκομον—ὁ κόσμος—ὁ προφήτης—εἰς τέλος—διδόναι δόξαν τῷ Θεῷ—οἱ Ἰουδαῖοι.

8. Discuss the text of the following:

(*a*) καὶ οὐδεὶς ἀναβέβηκεν εἰς τὸν οὐρανόν, εἰ μὴ ὁ ἐκ τοῦ οὐρανοῦ καταβάς, ὁ υἱὸς τοῦ ἀνθρώπου ὁ ὢν ἐν τῷ οὐρανῷ.

(b) ὁ πατήρ μου ὃς δέδωκέ μοι, μείζων πάντων ἐστί· καὶ οὐδεὶς δύναται ἁρπάζειν ἐκ τῆς χειρὸς τοῦ πατρός μου.

(c) ταῦτα εἰπὼν ὁ Ἰησοῦς ἐξῆλθε σὺν τοῖς μαθηταῖς αὐτοῦ πέραν τοῦ χειμάρρου τῶν Κέδρων, ὅπου ἦν κῆπος, εἰς ὃν εἰσῆλθεν αὐτὸς καὶ οἱ μαθηταὶ αὐτοῦ.

9. State and comment on the differences of rendering shewn by the Latin Versions in the following clauses:

(a) τὴν ἀρχὴν ὅ τι καὶ λαλῶ ὑμῖν.

(b) ὁ λόγος ὁ ἐμὸς οὐ χωρεῖ ἐν ὑμῖν.

(c) ἕως πότε τὴν ψυχὴν ἡμῶν αἴρεις;

(d) οὐχ ὅτι περὶ τῶν πτωχῶν ἔμελεν αὐτῷ, ἀλλ' ὅτι κλέπτης ἦν, ... καὶ τὰ βαλλόμενα ἐβάσταζεν.

(e) ὁ τύπος τῶν ἥλων.

B.

1. Explain carefully

(a) παχυτέραν ἐπὶ τοῦ λειψάνου τὴν λέξιν ἐπενόησεν ὁ εὐαγγελιστής.

(b) ἐπὶ δισσαῖς δὲ, ὡς γέγραπται, ταῖς ἰγνύαις ἀσθενεῖ.

(c) ὡς ἔχων ἐν ἑαυτῷ τὸν Πατέρα καὶ τὸ Πνεῦμα φυσικῶς, εἰς πληθυντικὸν ἀριθμὸν τὸ τῶν μαρτυρούντων πρόσωπον ἐξέτεινεν ὁ Σωτήρ.

(d) εἰ δὲ κατὰ τὸν σὸν, ὦ οὗτος, λόγον, τὸ ἐκ τῆς οὐσίας εἶναι τοῦ Θεοῦ καὶ Πατρὸς οὐκ ἔχει, καὶ τὸ εἶναι κατὰ φύσιν Υἱὸς καὶ Θεὸς συνατοβαλεῖ, καὶ ἀργήσει λοιπὸν τὸ περίπυστον θαῦμα τῆς ἀγάπης τοῦ Πατρός.

(e) δίπηχυ τυχὸν ἐπὶ γῆς ἑστάτω ξύλον· παρακείσθω δὲ καὶ φυτὸν, ἄρτι μὲν γῆς ὑπόκυπτον, χλωροὺς δὲ ἀνατεῖνον εἰς ἀέρα τοὺς ὄρπηκας.

(f) ἆρ' οὖν, ἐρεῖ τις τυχὸν, ἑτέραν ἡμῖν πρεσβεύει δόξαν ὁ βαπτιστὴς, καὶ τὸν τῆς ἀναστάσεως παραφθείρει λόγον;

2. Explain and illustrate Cyril's usage of

ἐρανίζομαι, γοργότερος, ἀπανθαδίζεσθαι, ἐν βίβλῳ παροιμιῶν, ἄνωθεν, κανονίζειν, πτῶμα.

Recount accurately his treatment of the Miracle at Cana of Galilee.

3. Explain

(a) ἀπολεγέτωσαν διὰ τί οὐκ εἴρηται· "εἰ τέκνα τοῦ Ἀβραὰμ ἔστε," τὸ ἔργον τοῦ Ἀβραὰμ ποιεῖτε, ἑνικῶς, ἀλλὰ πληθυντικῶς· "τὰ ἔργα τοῦ Ἀβραὰμ ποιεῖτε."

(*b*) εἰ δὲ "ὁ γεννηθεὶς ἐκ τοῦ Θεοῦ τηρεῖ ἑαυτὸν, καὶ ὁ πονηρὸς οὐχ ἅπτεται αὐτοῦ" ὁ μὴ τηρῶν ἑαυτὸν, ἵν' ὁ πονηρὸς αὐτοῦ μὴ ἅπτηται, οὐ γεγέννηται ἐκ τοῦ θεοῦ, καὶ πᾶς οὗ ἅπτεται ὁ πονηρὸς, οὗτος οὐ γεγέννηται ἐκ τοῦ θεοῦ· ἅπτεται δὲ ὁ πονηρὸς τῶν μὴ τηρούντων ἑαυτούς.

(*c*) εἰς ταῦτα δὲ ὁ Ἡρακλέων φησί· "πρὸς οὓς ὁ λόγος, ἐκ τῆς οὐσίας τοῦ διαβόλου ἦσαν·" ὡς ἑτέρας οὔσης τῆς τοῦ διαβόλου οὐσίας παρὰ τὴν τῶν ἁγίων λογικῶν οὐσίαν.

(*d*) μετὰ ταῦτα ζητήσαι τις ἂν, τί δήποτε δύο δυσφημίας αὐτῷ προσαψάντων, τήν τε· "Σαμαρείτης εἶ συ" καὶ τὴν· "δαιμόνιον ἔχεις" τῶν ἀποκριθέντων αὐτῷ Ἰουδαίων..., οὐχὶ πρὸς τὰς δύο ἀπεκρίνατο, ἀλλὰ πρὸς μόνην τὴν· "δαιμόνιον ἔχεις."

(*e*) εἶτ' ἐπιφέρει, ὅτι ὁ κρίνων καὶ κολάζων ἐστὶ Μωσῆς, τουτέστιν αὐτὸς ὁ νομοθέτης.

4. Illustrate Origen's usage of

ἀναγωγή, οἱ τὰς φύσεις εἰσάγοντες, ἡ ἀδιάφορος ζωή, ψιλὴ συγκατάθεσις, ἀνθυποφόρα, αἱ λεγόμεναι ὑπὸ τοῦ Σολομῶντος θεῖαι αἰσθήσεις.

and Augustine's explanation of

"Pascha", "mundus", "clarificatio", "sermo", "pressura", "omnitenens", "gratis".

5. Show how Augustine deals with the following questions

(*a*) Quomodo ecclesia timeat inquinare pedes, dum pergit ad Christum quod baptisma laverat Christi.

(*b*) Itane hoc meruit panis Christi porrectus de mensa Christi, ut post illum intraret in Ejus discipulum Satanas?

(*c*) Quid enim est boni operis ante fidem?

(*d*) Prius quaerendum illud occurrit, quomodo superius dixerit, "Omnia quae audivi a Patre meo, nota feci vobis," et hic dicat, "Adhuc multa habeo vobis dicere, sed non potestis portare modo."

(*e*) Haec est autem quaestio, "utrum spirituales homines habeant aliquid in doctrina, quod carnalibus taceant et spiritualibus dicant."

(*f*) Hic aliquis forsitan quaerat, utrum et a Filio procedat Spiritus Sanctus.

(*g*) Quid est autem quod sequitur, "Tui erant et mihi vos dedistis"? An aliquando erant Patris, quando non erant Unigeniti Filii Ejus?

6. Explain carefully, giving the context,

(*a*) Respuendi sunt a corde Christiano, qui putant ideo multas esse mansiones, qui extra regnum caelorum erit aliquid, ubi maneant beati innocentes qui sine baptismo ex hâc vitâ emigrarunt.

(*b*) Usque modo non petistis quidquam in nomine meo duobus modis intelligi potest.

(*c*) Nam quomodo erat verum, quod protestatus est Dominus et dixit 'Unus ex vobis'; si verum est quod ait idem ipse in Epistola sua, cujus est hoc Evangelium "Ex nobis exierunt, sed non erant ex nobis."

MONDAY, *June* 2, 1884. 9—12.

I. AND II. THESSALONIANS WITH CHRYSOSTOM'S HOMILIES; EPHESIANS WITH JEROME'S COMMENTARY; I. ST PETER.

A.

1. TRANSLATE the following passages, illustrating them by reference to such other passages in St Paul's Epistles or in the Acts of the Apostles as may occur to you.

(α) *αὐτοὶ γὰρ οἴδατε, ἀδελφοί, τὴν εἴσοδον ἡμῶν τὴν πρὸς ὑμᾶς ὅτι οὐ κενὴ γέγονεν, ἀλλὰ προπαθόντες καὶ ὑβρισθέντες καθὼς οἴδατε ἐν Φιλίπποις ἐπαρρησιασάμεθα ἐν τῷ θεῷ ἡμῶν λαλῆσαι πρὸς ὑμᾶς τὸ εὐαγγέλιον τοῦ θεοῦ ἐν πολλῷ ἀγῶνι. ἡ γὰρ παράκλησις ἡμῶν οὐκ ἐκ πλάνης οὐδὲ ἐξ ἀκαθαρσίας οὐδὲ ἐν δολῷ, ἀλλὰ καθὼς δεδοκιμάσμεθα ὑπὸ τοῦ θεοῦ πιστευθῆναι τὸ εὐαγγέλιον οὕτως λαλοῦμεν, οὐχ ὡς ἀνθρώποις ἀρέσκοντες ἀλλὰ θεῷ τῷ δοκιμάζοντι τὰς καρδίας ἡμῶν.*

(β) *διότι ἠθελήσαμεν ἐλθεῖν πρὸς ὑμᾶς, ἐγὼ μὲν* Παῦλος *καὶ ἅπαξ καὶ δίς, καὶ ἐνέκοψεν ἡμᾶς ὁ* Σατανᾶς.

State what you know about the character of that text of St Paul's Epistles which was used by Chrysostom.

2. Give the Greek of the following:

'For this cause I bow my knees unto the Father of our Lord Jesus Christ, of whom the whole family in heaven and earth is named, that he would grant you, according to the riches of his glory, to be strengthened with might[1] by his Spirit in the inner man[2]; that Christ may dwell in your hearts by faith; that ye, being rooted and grounded in love, may be able to comprehend with all saints what is the breadth, and length, and depth, and height; and to know the love of Christ which passeth knowledge, that ye may be filled with all the fulness of God.'

[1] virtutem (vulg Sixt cum it)...virtute (vulg Clem cum Hier[eph 3, 3, 887])

[2] in interiore homine (vulg Sixt cum pp. ll. Bodl)...in interiorem hominem (vulg Clem cum Hier[eph 3, 3, 887])

Explain the above notes, and comment upon the phenomena presented by them.

What explanation does Jerome give of '*latitudo, et longitudo, et profundum, et altitudo*'? What is the Vulgate translation of this phrase?

3. Translate, with comments upon *four* words or phrases in each passage:

(α) *καὶ ὑμᾶς ὄντας νεκροὺς τοῖς παραπτώμασιν καὶ ταῖς ἁμαρτίαις ὑμῶν, ἐν αἷς ποτὲ περιεπατήσατε κατὰ τὸν αἰῶνα τοῦ κόσμου τούτου, κατὰ τὸν ἄρχοντα τῆς ἐξουσίας τοῦ ἀέρος, τοῦ πνεύματος τοῦ νῦν ἐνεργοῦντος ἐν τοῖς υἱοῖς τῆς ἀπειθίας...*

(β) *...ἵνα μοι δοθῇ λόγος ἐν ἀνοίξει τοῦ στόματός μου, ἐν παρρησίᾳ γνωρίσαι τὸ μυστήριον [τοῦ εὐαγγελίου] ὑπὲρ οὗ πρεσβεύω ἐν ἁλύσει, ἵνα ἐν αὐτῷ παρρησιάσωμαι ὡς δεῖ με λαλῆσαι. Ἵνα δὲ εἰδῆτε καὶ ὑμεῖς τὰ κατ' ἐμέ, τί πράσσω, πάντα γνωρίσει ὑμῖν* Τυχικὸς *ὁ ἀγαπητὸς ἀδελφὸς καὶ διάκονος ἐν κυρίῳ, ὃν ἔπεμψα πρὸς ὑμᾶς εἰς αὐτὸ τοῦτο ἵνα γνῶτε τὰ περὶ ἡμῶν καὶ παρακαλέσῃ τὰς καρδίας ὑμῶν.*

4. Translate:

'*Sanctis omnibus qui sunt Ephesi.* Quidam curiosius quam necesse est, putant ex eo quod Moysi dictum sit: Haec dices filiis Israel; Qui est, misit me: etiam eos qui Ephesi sunt sancti et fideles, essentiae vocabulo nuncupatos.'

To what commentator and to what reading is Jerome supposed to refer in this place? What account is to be given of the peculiar condition of the text in question?

5. Translate with notes:

'Lux autem arguit ea quae prius erant tenebrae, et postea facta sunt lumen in Domino: ut ex eo quod corripiuntur, mutentur in melius, et mutata manifestentur in publico, et publicata sint lumen: quia omne quod manifestatur lux est. Propter quod dicit: Surge qui dormis, et exurge a mortuis, et illuminabit te Christus.'

Give the complete quotation in the Greek.

What various reading in place of '*illuminabit*' does Jerome record? How was it interpreted?

6. Give the Greek of the following:—'*prædestinatio*', '*propositio*': '*recapitulare*' ('*instaurare*'): '*notio*', '*agnitio*': '*plasmatio*', '*factura*': '*delicta*', '*peccata*': '*fortitudo*', '*virtus*'.

B.

1. What special words of prophecy seem to have influenced the statements and language of the earlier part of the Second Epistle to the Thessalonians? How far does a comparison between them and the language of St Paul throw light upon the Apostle's views as to the divine character of the Saviour?

2. *ὑπεραυξάνει ἡ πίστις ὑμῶν καὶ πλεονάζει ἡ ἀγάπη ἑνὸς ἑκάστου πάντων ὑμῶν εἰς ἀλλήλους.*

Translate this, and give Chrysostom's comment upon it.

3. *θεὸς ἐνδοξάζεται ἐν τοῖς ἁγίοις αὐτοῦ. πῶς; ὅταν γὰρ ἴδωσιν οἱ μέγα φυσῶντες τοὺς μαστιζομένους ὑπ' αὐτῶν...τούτους ἐγγὺς ὄντας αὐτοῦ, δόξα αὐτοῦ γίνεται· μᾶλλον δὲ αὐτῶν δόξα ἐστὶ, καὶ αὐτῶν καὶ αὐτοῦ· αὐτοῦ μὲν ὅτι αὐτοὺς οὐκ ἐγκατέλιπεν, ἀλλὰ λαμπροὺς ἀπέδειξεν· αὐτῶν δὲ ὅτι τοσαύτης κατηξιώθησαν τιμῆς.....καὶ θαυμασθῆναι, φησὶν, ἐν πᾶσι τοῖς πιστεύσασι, τούτεστι διὰ τῶν πιστευσάντων. ἴδου, πάλιν τὸ ἐν, διὰ ἐστί.*

Translate and comment on this. Do you agree with Chrysostom that *ἐν* here = *διά*?

4. What was Chrysostom's opinion of the meaning of *ἡ ἀποστασία*, and of the whole passage? How might that opinion be supported? Mention any other interpretations of the passage and give some of the arguments of those who hold any special interpretation.

5. Criticise the following words or passages in the Vulgate:—*ut digni habeamini: poenas dabunt in interitum: rogamus vos per adventum:* and give the Greek of the passage translated "Et nunc quid detineat scitis, ut reveletur in suo tempore. Nam mysterium jam operatur iniquitatis, tantum ut qui tenet nunc teneat donec de medio fiat."

C.

FIRST EPISTLE OF ST PETER.

1. (*a*) What is the order of the Epistles in the older MSS? What does this order seem to teach as to the estimate held by the early collectors of the relative degrees of honour due to the Apostles?

(*β*) Judging by internal evidence what was the character of the 'strangers of the dispersion' to whom the letter was addressed?

Mention any important alterations introduced into the text of the Elzevir edition.

2. Illustrate from other parts of the New Testament the use of the following words or phrases as we find them here.

πρόγνωσις, ῥαντισμός, ἀναγέννησις, κατὰ θεόν, παροικία, θυσίαι πνευματικαί, συνείδησις, σκεῦος.

3. Translate and illustrate from the Old Testament (explaining where necessary)

(*a*) *ὑμεῖς δὲ γένος ἐκλεκτόν, βασίλειον ἱεράτευμα, ἔθνος ἅγιον, λαὸς εἰς περιποίησιν, ὅπως τὰς ἀρετὰς ἐξαγγείλητε τοῦ ἐκ σκότους ὑμᾶς καλέσαντος εἰς τὸ θαυμαστὸν αὐτοῦ φῶς· οἱ ποτὲ οὐ λαός, νῦν δὲ λαὸς θεοῦ· οἱ οὐκ ἠλεημένοι, νῦν δὲ ἐλεηθέντες.*

(*b*) *καὶ τίς ὁ κακώσων ὑμᾶς, ἐὰν τοῦ ἀγαθοῦ ζηλωταὶ γένησθε; ἀλλ' εἰ καὶ πάσχοιτε διὰ δικαιοσύνην, μακάριοι. "τὸν δὲ φόβον αὐτῶν μὴ φοβηθῆτε, μηδὲ ταραχθῆτε· Κύριον δὲ τὸν Χριστὸν ἁγιάσατε" ἐν ταῖς καρδίαις ὑμῶν.*

(*c*) *εἰ ὀνειδίζεσθε ἐν ὀνόματι Χριστοῦ, μακάριοι· ὅτι τὸ τῆς δόξης καὶ δυνάμεως καὶ τὸ τοῦ θεοῦ πνεῦμα ἐφ' ὑμᾶς ἀναπαύεται. μὴ γάρ τις ὑμῶν πασχέτω ὡς φονεύς, ἢ κλέπτης, ἢ κακοποιός, ἢ ὡς ἀλλοτριεπίσκοπος. εἰ δὲ ὡς χριστιανός, μὴ αἰσχυνέσθω, δοξαζέτω δὲ τὸν θεὸν ἐν τῷ ὀνόματι τούτῳ.*

What variety of reading is there here?

4. Give briefly the chief interpretations of the passage iii. 19, *ἐν ᾧ καὶ τοῖς ἐν φυλακῇ πνεύμασιν πορευθεὶς ἐκήρυξε*, stating which you prefer.

5. What differences in the interpretation of the passages concerned are suggested by the various readings noted below.

(*a*) *διὰ λόγου ζῶντος θεοῦ καὶ μένοντος.*

(*b*) *ἵνα ἐν αὐτῷ αὐξηθῆτε εἰς σωτηρίαν.*

(*c*) *ἕτοιμοι ἀεὶ... ἀλλὰ μετὰ πραΰτητος καὶ φόβου.*

(*d*) *νήψατε εἰς προσευχάς.*

(*e*) *ἀγάπη καλύψει πλῆθος ἁμαρτιῶν.*

MONDAY, *June* 2, 1884. 1.30—4.30.

GREEK TESTAMENT. GENERAL PAPER.

A.

1. INDICATE the testimony borne by Polycarp to the Books of the New Testament. Shew its special value, and point out the features which are common to it and to that of the Apostolic Fathers generally.

2. Examine carefully the evidence furnished by the Diatessaron of Tatian to the Canon of the New Testament.

3. *τὴν σήμερον οὖν Κυριακὴν ἁγίαν ἡμέραν διηγάγομεν, ἐν ᾗ ἀνέγνωμεν ὑμῶν τὴν ἐπιστολήν· ἣν ἔξομεν ἀεί ποτε ἀναγινώσκοντες νουθετεῖσθαι, ὡς καὶ τὴν προτέραν ἡμῖν διὰ Κλήμεντος γραφεῖσαν.*

What points do these words establish? Shew clearly their bearing upon the authenticity of the New Testament. How does their author elsewhere speak of the New Testament writings?

4. Translate, with brief notes on words between asterisks:

(α) *πρὸ δὲ τούτων πάντων ἐπιβαλοῦσιν ἐφ' ὑμᾶς τὰς χεῖρας αὐτῶν καὶ διώξουσιν, παραδιδόντες εἰς τὰς συναγωγὰς καὶ φυλακάς, *ἀπαγομένους* ἐπὶ βασιλεῖς καὶ ἡγεμόνας ἕνεκεν τοῦ ὀνόματός μου· *ἀποβήσεται ὑμῖν εἰς* μαρτύριον.*

(β) *καὶ *μὴ* ἀσθενήσας τῇ πίστει *κατενόησεν* τὸ ἑαυτοῦ σῶμα ἤδη νενεκρωμένον, ἑκατονταετής που ὑπάρχων, καὶ τὴν νέκρωσιν τῆς μήτρας Σάρρας, *εἰς* δὲ τὴν ἐπαγγελίαν τοῦ θεοῦ οὐ *διεκρίθη τῇ ἀπιστίᾳ* ἀλλὰ ἐνεδυναμώθη τῇ πίστει, δοὺς δόξαν τῷ θεῷ καὶ *πληροφορηθεὶς* ὅτι ὃ ἐπήγγελται δυνατός ἐστιν καὶ ποιῆσαι.*

(γ) *διὰ *τῆς δοκιμῆς τῆς διακονίας* ταύτης δοξάζοντες τὸν θεὸν ἐπὶ *τῇ ὑποταγῇ τῆς ὁμολογίας* ὑμῶν εἰς τὸ εὐαγγέλιον τοῦ χριστοῦ καὶ *ἁπλότητι* τῆς κοινωνίας εἰς αὐτοὺς καὶ εἰς πάντας, καὶ αὐτῶν δεήσει ὑπὲρ ὑμῶν ἐπιποθούντων ὑμᾶς διὰ τὴν ὑπερβάλλουσαν χάριν τοῦ θεοῦ ἐφ' ὑμῖν.*

(δ) *καὶ διὰ τοῦτο καὶ ἡμεῖς εὐχαριστοῦμεν τῷ θεῷ ἀδιαλείπτως, ὅτι παραλαβόντες λόγον *ἀκοῆς* παρ' ἡμῶν τοῦ θεοῦ ἐδέξασθε οὐ λόγον ἀνθρώπων ἀλλὰ καθὼς ἀληθῶς ἐστὶν λόγον θεοῦ, ὃς καὶ *ἐνεργεῖται* ἐν ὑμῖν τοῖς πιστεύουσιν.*

(ε) *οὕτως καὶ ἡ γλῶσσα μικρὸν μέλος ἐστὶν καὶ μεγάλα αὐχεῖ. ἰδοὺ ἡλίκον πῦρ ἡλίκην ὕλην ἀνάπτει· καὶ ἡ γλῶσσα πῦρ, *ὁ κόσμος* τῆς ἀδικίας ἡ γλῶσσα καθίσταται ἐν τοῖς μέλεσιν ἡμῶν, ἡ σπιλοῦσα ὅλον τὸ σῶμα καὶ φλογίζουσα *τὸν τροχὸν τῆς γενέσεως* καὶ φλογιζομένη ὑπὸ τῆς *γεέννης*.*

5. Illustrate by parallels the following passages giving the context of each and stating to whom and under what circumstances each was written:

(α) *κἀγώ, ἀδελφοί, οὐκ ἠδυνήθην λαλῆσαι ὑμῖν ὡς πνευματικοῖς ἀλλ' ὡς σαρκίνοις, ὡς νηπίοις ἐν Χριστῷ. γάλα ὑμᾶς ἐπότισα, οὐ βρῶμα, οὔπω γὰρ ἐδύνασθε. ἀλλ' οὐδὲ ἔτι νῦν δύνασθε, ἔτι γὰρ σαρκικοί ἐστε.*

(β) τοῦτο δὲ πρὸς τὸ ὑμῶν αὐτῶν σύμφορον λέγω, οὐχ ἵνα βρόχον ὑμῖν ἐπιβάλω, ἀλλὰ πρὸς τὸ εὔσχημον καὶ εὐπάρεδρον τῷ κυρίῳ ἀπερισπάστως.

(γ) ἄλλας ἐκκλησίας ἐσύλησα λαβὼν ὀψώνιον πρὸς τὴν ὑμῶν διακονίαν, καὶ παρὼν πρὸς ὑμᾶς καὶ ὑστερηθεὶς οὐ κατενάρκησα οὐθενός.

(δ) οὐ γάρ ἐστιν ἡ βασιλεία τοῦ θεοῦ βρῶσις καὶ πόσις, ἀλλὰ δικαιοσύνη καὶ εἰρήνη καὶ χαρὰ ἐν πνεύματι ἁγίῳ.

(ε) ἐν μεγάλῃ δὲ οἰκίᾳ οὐκ ἔστιν μόνον σκεύη χρυσᾶ καὶ ἀργυρᾶ ἀλλὰ καὶ ξύλινα καὶ ὀστράκινα, καὶ ἃ μὲν εἰς τιμὴν ἃ δὲ εἰς ἀτιμίαν.

6. Write brief historical notes explaining and illustrating the following passages:

(α) διὸ καὶ ἐνεκοπτόμην τὰ πολλὰ τοῦ ἐλθεῖν πρὸς ὑμᾶς.

(β) οὐ θέλω γὰρ ὑμᾶς ἄρτι ἐν παρόδῳ ἰδεῖν, ἐλπίζω γὰρ χρόνον τινὰ ἐπιμεῖναι πρὸς ὑμᾶς, ἐὰν ὁ κύριος ἐπιτρέψῃ.

(γ) ἐν παντὶ συνεστήσατε ἑαυτοὺς ἁγνοὺς εἶναι τῷ πράγματι.

(δ) οὐδέν με ἠδικήσατε· οἶδατε δὲ ὅτι δι' ἀσθένειαν τῆς σαρκὸς εὐηγγελισάμην ὑμῖν τὸ πρότερον.

(ε) οὐδένα γὰρ ἔχω ἰσόψυχον ὅστις γνησίως τὰ περὶ ὑμῶν μεριμνήσει.

(ζ) οἶδας τοῦτο ὅτι ἀπεστράφησάν με πάντες οἱ ἐν τῇ Ἀσίᾳ, ὧν ἐστὶν Φύγελος καὶ Ἑρμογένης.

7. Give in outline the teaching of the New Testament on marriage, OR slavery.

8. Render into Greek:

Think not my silence forgetfulness; or that my love is as dumb as my papers; though business may stop my hand, yet my heart a much better member is always with you: and which is more, with our good and gracious God, incessantly begging some ease of your pains, with that earnestness, that becomes your griefs and my love. God who knows and sees this Writing, knows also that my soliciting Him has been much, and my tears many for you; judge me then by those waters, and not by my ink, and then you shall justly value your most truly, most heartily, affectionate Brother and Servant,

GEORGE HERBERT.

(Letter written at Cambridge, 'For my dear sick Sister'.)

B.

1. Translate and explain:

διὰ τοῦτο ταῖς θείαις γραφαῖς ἀφόβως ἐπέβαλον τὰς χεῖρας, λέγοντες αὐτὰς διωρθωκέναι. καὶ ὅτι τοῦτο μὴ καταψευδόμενος αὐτῶν λέγω, ὁ βουλόμενος δύναται μαθεῖν. εἰ γάρ τις θελήσει συγκομίσας αὐτῶν ἑκάστου τὰ ἀντίγραφα ἐξετάζειν πρὸς ἄλληλα, κατὰ πολὺ ἂν εὕροι διαφωνοῦντα. ἀσύμφωνα γοῦν ἔσται τὰ Ἀσκληπιάδου τοῖς Θεοδότου. πολλῶν δὲ ἔστιν εὐπορῆσαι, διὰ τὸ φιλοτίμως ἐγγεγράφθαι τοὺς μαθητὰς αὐτῶν τὰ ὑφ' ἑκάστου αὐτῶν, ὡς αὐτοὶ καλοῦσι, κατωρθωμένα, τουτέστιν ἠφανισμένα.

How far does existing documentary evidence justify this assertion?

2. Translate:

Magnus siquidem hic in nostris codicibus error inolevit, dum quod in eadem re alius evangelista plus dixit, in alio quia minus invenerint addiderunt; vel dum eundem sensum alius aliter expressit, ille qui unum e quattuor primum legerat ad ejus exemplum ceteros quoque æstimaverit emendandos. Unde accidit ut apud nos mixta sint omnia, et in Marco plura Lucæ atque Matthæi, rursum in Matthæo Johannis et Marci, et in ceteris reliquorum quæ aliis propria sunt inveniantur.

Where is this passage to be found? Quote from the Gospels to illustrate its correctness.

3. Discuss the readings in *four* of the following passages:

(*a*) καὶ ἦν κηρύσσων ἐν ταῖς συναγωγαῖς τῆς Γαλιλαίας.

(*b*) καὶ δεξάμενος ποτήριον, εὐχαριστήσας εἶπε, Λάβετε τοῦτο καὶ διαμερίσατε ἑαυτοῖς· λέγω γὰρ ὑμῖν, ὅτι οὐ μὴ πίω ἀπὸ τοῦ γεννήματος τῆς ἀμπέλου, ἕως ὅτου ἡ βασιλεία τοῦ Θεοῦ ἔλθῃ. καὶ λαβὼν ἄρτον, εὐχαριστήσας ἔκλασε, καὶ ἔδωκεν αὐτοῖς, λέγων, Τοῦτό ἐστι τὸ σῶμά μου, τὸ ὑπὲρ ὑμῶν διδόμενον· τοῦτο ποιεῖτε εἰς τὴν ἐμὴν ἀνάμνησιν. ὡσαύτως καὶ τὸ ποτήριον μετὰ τὸ δειπνῆσαι, λέγων, Τοῦτο τὸ ποτήριον ἡ καινὴ διαθήκη ἐν τῷ αἵματί μου, τὸ ὑπὲρ ὑμῶν ἐκχυνόμενον.

(*c*) ὁ δὲ Ἀγρίππας πρὸς τὸν Παῦλον ἔφη, Ἐν ὀλίγῳ με πείθεις Χριστιανὸν γενέσθαι.

(*d*) ἀλλ' ἐγενήθημεν ἤπιοι ἐν μέσῳ ὑμῶν, ὡς ἂν τροφὸς θάλπῃ τὰ ἑαυτῆς τέκνα.

(*e*) κομιούμενοι μισθὸν ἀδικίας, ἡδονὴν ἡγούμενοι τὴν ἐν ἡμέρᾳ τρυφήν, σπῖλοι καὶ μῶμοι, ἐντρυφῶντες ἐν ταῖς ἀπάταις αὐτῶν, συνευωχούμενοι ὑμῖν.

(*f*) καὶ ἐξῆλθον οἱ ἑπτὰ ἄγγελοι ἔχοντες τὰς ἑπτὰ πληγὰς ἐκ τοῦ ναοῦ, ἐνδεδυμένοι λίνον καθαρὸν καὶ λαμπρὸν, καὶ περιεζωσμένοι περὶ τὰ στήθη ζώνας χρυσᾶς.

4. Write a full critical note upon one of the following passages:

καὶ μὴ εἰσενέγκῃς ἡμᾶς εἰς πειρασμὸν, ἀλλὰ ῥῦσαι ἡμᾶς ἀπὸ τοῦ πονηροῦ. ὅτι σοῦ ἐστιν ἡ βασιλεία καὶ ἡ δύναμις καὶ ἡ δόξα εἰς τοὺς αἰῶνας. ἀμήν.

Or

καὶ ὁμολογουμένως μέγα ἐστὶ τὸ τῆς εὐσεβείας μυστήριον· Θεὸς ἐφανερώθη ἐν σαρκὶ, ἐδικαιώθη ἐν πνεύματι, ὤφθη ἀγγέλοις, ἐκηρύχθη ἐν ἔθνεσιν, ἐπιστεύθη ἐν κόσμῳ, ἀνελήφθη ἐν δόξῃ.

5. Retranslate:

(*a*) Omnes enim peccaverunt et egent gloria Dei, justificati gratis per gratiam ipsius, per redemptionem quæ est in Christo Jesu, quem proposuit Deus propitiationem per fidem in sanguine ipsius, ad ostensionem justitiæ suæ, propter remissionem præcedentium delictorum in sustentatione Dei, ad ostensionem justitiæ ejus in hoc tempore; ut sic ipse justus et justificans eum, qui est ex fide Jesu Christi.

(*b*) Ecce mysterium vobis dico; omnes quidem resurgemus, sed non omnes immutabimur. In momento, in ictu oculi, in novissima tuba; canet enim tuba, et mortui resurgent incorrupti; et nos immutabimur. Oportet enim corruptibile hoc induere incorruptionem, et mortale hoc induere immortalitatem. Cum autem mortale hoc induerit immortalitatem, tunc fiet sermo, qui scriptus est; "Absorpta est mors in victoria. Ubi est, mors, victoria tua? ubi est mors, stimulus tuus?"

SECTION III.

TUESDAY, *June* 3, 1884. 9—12.

A.

THE CLEMENTINE RECOGNITIONS.

[*Candidates are requested not to answer more than* **four** *of these questions.*]

1. DISCUSS fully the relations of the Clementine Recognitions to the Clementine Homilies.

2. Criticise the subject-matter and arrangement of the Clementine Recognitions; and account for the intermixture of narrative and formal treatise.

3. What are the views maintained in "the Recognitions" with respect to (*a*) the nature and purpose of Israelite sacrifices, (*b*) the "imago Dei"?

4. Explain the use of the following words and phrases, giving the context, where possible:

"verus propheta", "inimicus quidam", "genesis", "Ausen", "septimana annorum", "Bragmani", "ordo viduarum", "annus Dei acceptus", "Eliesdros", "Stans", "Ingenitum", "climactera", "impossibilis", "cathedra", "major omnium", "anacephalæosis".

5. Discuss the manner of quotation from Scripture and estimate the value in which the writings of the O. T. and N. T. were held in this book.

THE BOOK OF WISDOM.

[*Candidates are requested not to answer more than* **two** *of the* **first four** *questions.*]

6. What position does this book hold with respect to the O. T. Canon?

Show from internal grounds in what language and at what date it was composed.

7. Discuss its place among the so-called "Sapiential" books.

Examine the theory that Philo was the author, and compare the use of λόγος and σοφία in Alexandrine literature.

8. Quote passages from the N. T. which are said to show traces of acquaintance with the Book of Wisdom.

Examine the theory that our text of the book contains Christian interpolations.

9. Illustrate from the Book of Wisdom the use and meaning of the following words:

εἰκών, ὁ δίκαιος, πνεῦμα, μυστήριον, κτίσις, πρωτόπλαστος, υἱὸς θεοῦ, ἐπισκοπή, ἀνέβρασεν.

10. Translate with short notes:

(a) οὐδὲ κατοικήσει ἐν σώματι καταχρέῳ ἁμαρτίας.

(b) βασκανία γὰρ φαυλότητος ἀμαυροῖ τὰ καλά καὶ ῥεμβασμὸς ἐπιθυμίας μεταλλεύει νοῦν ἄκακον.

(c) πάσης γὰρ κινήσεως κινητικώτερον...διήκει δὲ καὶ χωρεῖ διὰ πάντων διὰ τὴν καθαρότητα.

(d) ἀντὶ μὲν πηγῆς ἀεννάου ποτάμου αἵματι λυθρώδει ταραχθέντες εἰς ἔλεγχον νηπιοκτόνου διατάγματος ἔδωκας αὐτοῖς δάψιλες ὕδωρ ἀνελπίστως.

(e) ἀνθ' ἧς κολάσεως εὐεργετήσας τὸν λαόν σου εἰς ἐπιθύμιαν ὀρέξεως ξένην γεῦσιν τροφὴν ἡτοίμασας ὀρτυγόμητραν.

(f) ἡ μὲν γὰρ ὑπόστασίς σου τὴν σὴν γλυκύτητα πρὸς τέκνα ἐνεφάνισε τῇ δὲ τοῦ προσφερομένου ἐπιθυμίᾳ ὑπηρετῶν πρὸς ὅ τις ἐβούλετο μετεκιρνᾶτο.

(g) δειλὸν γὰρ ἰδίως πονηρία μαρτυρεῖ καταδικαζομένη· ἀεὶ δὲ προσείληφε τὰ χαλεπὰ συνεχομένη τῇ συνειδήσει.

(h) κρυφῇ γὰρ ἐθυσίαζον ὅσοι παῖδες ἀγαθῶν, καὶ τὸν τῆς θειότητος νόμον ἐν ὁμονοίᾳ διέθεντο, τῶν αὐτῶν ὁμοίως καὶ ἀγαθῶν καὶ κινδύνων μεταλήψεσθαι τοὺς ἁγίους, πατέρων ἤδη προαναμελπόντων αἴνους.

11. Explain:

(a) ὡς ῥοπὴ ἐκ πλαστίγγων, (b) διὰ τὴν εἰδέχθειαν τῶν ἐπαπεσταλμένων, (c) κρυσταλλόειδες γένος ἀμβροσίας τροφῆς, (d) γεωδὲς σκῆνος, (e) λήψεται πανόπλιαν τὸν ζῆλον αὐτοῦ, (f) κλῆρος ἐν ναῷ θεοῦ θυμηρέστερος, (g) ἀδύνατος νύξ.

B.

JOSEPHUS. ANTIQUITIES. BOOKS XIX. XX.

1. Give the substance of the closing chapter of the "Antiquities." Illustrate any of the statements there made by knowledge gained elsewhere respecting the life and work of Josephus. Remark on the salient points of his Preface, and sketch in outline the plan of his "Antiquities."

Or

Quote or give the substance of passages in these books relating to the state of the departed.

2. Translate with brief historical notes:

(a) ὅθεν ἐπίτηδες τοῖς τε ἁπάντων νόμοις καὶ τῷ ἀσφαλεῖ μεγάλην συνήνεγκεν εὐδαιμονίας ῥοπὴν ὁ θάνατος αὐτοῦ, ἔθνει τε τῷ ἡμετέρῳ οὐδὲ εἰς ὀλίγον ἐξεγεγόνει μὴ οὐκ ἀπολωλέναι, μὴ ταχείας αὐτῷ τελευτῆς παραγενομένης.

βούλομαι δὲ δι' ἀκριβείας τὸν πάντα περὶ αὐτοῦ λόγον διελθεῖν, ἄλλως τε καὶ ἐπειδὴ πολλὴν ἔχει πίστιν τοῦ θεοῦ τῆς δυνάμεως καὶ παραμυθίαν τοῖς ἐν τύχαις κειμένοις καὶ σωφρονισμὸν τοῖς οἰομένοις ἀίδιον τὴν εὐτυχίαν, ἀλλὰ μὴ ἐπὶ μήκιστον φέρειν κακὸν ἀρετῆς αὐτῇ μὴ παραγενομένης.

(b) καὶ Μινουκιανὸν μὲν καὶ Κλήμης (ἀνάγεται γὰρ ἐπὶ τοῦτον) μεθίησι, πολλῶν μετ' ἄλλων συγκλητικῶν δικαιοσύνην τῇ πράξει συμμαρτυρῶν καὶ ἀρετὴν τοῖς ἐντεθυμημένοις καὶ πράσσειν μὴ ἀποδεδειλιακόσι· τυραννίδα γὰρ εἰς ὀλίγον μὲν ἀνθεῖν ἡδονῇ τοῦ ὑβρίζειν ἐπαρθεῖσαν, εὐτυχεῖς δὲ οὐκ ἄρα ποιεῖσθαι τὰς ἀπαλλαγὰς τοῦ βίου, μίσει τῆς ἀρετῆς πρὸς αὐτὴν χρωμένης, ἀλλὰ μετὰ τοιαύτης δυστυχίας ὁποίᾳ δὴ Γάιον συνελθεῖν, πρὸ τῶν ἐπαναστάντων καὶ συνθέντων τὴν ἐπίθεσιν αὐτὸν ἐπίβουλον αὐτῷ γενόμενον, καὶ διδάξαντα οἷς ὑβρίζων ἀφόρητος ἦν, ἀφανίζων τοῦ νόμου τὴν πρόνοιαν, πολέμῳ πρὸς αὐτὸν χρῆσθαι τοὺς φιλτάτους, καὶ νῦν λόγῳ μὲν εἶναι τούτους οἳ ἀνῃρήκασι Γάιον, ἔργῳ δὲ αὐτὸν ὑφ' ἑαυτοῦ κεῖσθαι διολωλότα.

(c) αἴτιον δ' ἦν ἡ περὶ τὰ ἀχρεῖα σπουδὴ καὶ τὸ δαπανῶντα εἰς ἡδονάς, αἳ κατὰ μόνας ἔμελλον ὠφελεῖν αὐτῷ, ὑφαιρεῖν τὴν ἐπὶ τοῖς κρείττοσιν ἀνωμολογημένοις φιλοτιμίαν. ἄλλως δὲ ῥήτωρ τε ἄριστος καὶ γλώσσῃ τῇ Ἑλλάδι καὶ τῇ Ῥωμαίοις πατρίῳ σφόδρα ἠσκημένος, συνίει τε ἐκ τοῦ παραχρῆμα, καὶ τοῖς ὑφ' ἑτέρων συντεθεῖσί τε καὶ ἐκ πλείονος προσυγκειμένοις ἀντειπὼν ἐκ τοῦ ὀξέος φανῆναι πιθανώτερος ἐν μεγίστῳ πράγματι παρ' ὀντιναοῦν γενόμενος, εὐκολίᾳ τε εἰς αὐτὸ τῆς φύσεως καὶ τῷ εἰς ἰσχὺν αὐτῇ προσλαβεῖν μελέτην τοῦ ἐπιπονεῖν.

3. Remark on the following words, phrases, and constructions:

πυρριχισμός—αἰτία δὲ ἦν τοῦ προθύμως διαφευξομένου τῶν θεωρῶν Ἀλκύων ὁ ἰατρός—τῶν κατὰ τὴν παιδείαν μεμελετηκότα—τῷ κατ' αὐτὸν ἀμεταπτώτῳ τοῦ σχήματος—ἐπιτροπεύω—τὸ γαζοφυλάκιον—ἀποστολή—θρησκεύω.

4. Compare Josephus' account of the end of Agrippa I. with that given by St Luke. What do we learn from Josephus respecting other descendants of Herod the Great?

Or

Under what rulers were the several parts of the Holy Land from the death of Herod the Great till the Fall of Jerusalem? Sketch briefly the characters of the several Roman procurators.

5. What do we gather from these books touching the High Priesthood during the period which followed the Crucifixion?

διὰ τοῦτο οἶμαι καὶ τὸν θεὸν μισήσαντα τὴν ἀσέβειαν αὐτῶν ἀποστραφῆναι μὲν ἡμῶν τὴν πόλιν, τὸ δὲ ἱερὸν οὐκ ἔτι καθαρὸν οἰκητήριον αὐτῷ κρίναντα, Ῥωμαίους ἐπαγαγεῖν ἡμῖν.

Compare the view here expressed with the light in which the same subject is placed by the Gospel narrative.

SELECTED GREEK AND LATIN ECCLESIASTICAL WRITERS.

TUESDAY, *June* 3, 1884. 1.30—4.30.

IGNATIUS, EPISTLES.

1. WHAT arguments may be drawn from the language of the Ignatian Epistles as to the genuineness of any one of the forms in which they have come down to us?

2. Compare Ignatius' view of the Episcopal office with those (*a*) of the N. T., (*b*) of the First Epistle of Clement to the Corinthians, (*c*) of Cyprian.

3. What testimony does Ignatius give (1) to the doctrine of the Divinity of Christ, (2) to the existence in his time of St John's Gospel, and (3) to the nature of the Lord's Supper?

4. Translate and comment on

(1) Εἰ γὰρ ἐγὼ ἐν μικρῷ χρόνῳ τοιαύτην συνήθειαν ἔσχον πρὸς τὸν ἐπίσκοπον ὑμῶν, οὐκ ἀνθρωπίνην οὖσαν, ἀλλὰ πνευματικήν, πόσῳ μᾶλλον ὑμᾶς μακαρίζω, τοὺς ἐγκεκραμένους οὕτως, ὡς ἡ ἐκκλησία Ἰησοῦ Χριστῷ, καὶ ὁ Ἰησοῦς Χριστὸς τῷ πατρὶ, ἵνα πάντα ἐν ἑνότητι σύμφωνα ᾖ; Μηδεὶς πλανάσθω· ἐὰν μή τις ᾖ ἐντὸς τοῦ θυσιαστηρίου, ὑστερεῖται τοῦ ἄρτου τοῦ θεοῦ.

(2) Ὅτι εἷς θεός ἐστιν, ὁ φανερώσας ἑαυτὸν διὰ Ἰησοῦ Χριστοῦ τοῦ υἱοῦ αὐτοῦ, ὅς ἐστιν αὐτοῦ λόγος ἀΐδιος, οὐκ ἀπὸ σιγῆς προελθὼν, ὃς κατὰ πάντα εὐηρέστησαν τῷ πέμψαντι αὐτόν.

(3) Οὐκ ἐπεὶ ἔγνων τοιοῦτόν τι ἐν ὑμῖν, ἀλλὰ προφυλάσσω ὑμᾶς ὄντας μου ἀγαπητοὺς, προορῶν τὰς ἐνέδρας τοῦ διαβόλου. Ὑμεῖς οὖν πραϋπάθειαν ἀναλαβόντες ἀνακτίσασθε ἑαυτοὺς ἐν πίστει, ὅ ἐστιν σὰρξ τοῦ κυρίου, καὶ ἐν ἀγάπῃ, ὅ ἐστιν αἷμα Ἰησοῦ Χριστοῦ.

(4) Ὁ δὲ τοκετός μοι ἐπίκειται. Σύγγνωτέ μοι ἀδελφοί· μὴ ἐμποδίσητέ μοι ζῆσαι, μὴ θελήσητέ μοι ἀποθανεῖν, τὸν τοῦ θεοῦ θέλοντα εἶναι. Κόσμῳ μὴ χωρίζησθε. Ἄφετέ με καθαρὸν φῶς λαβεῖν· ἐκεῖ παραγενόμενος, ἄνθρωπος θεοῦ ἔσομαι. Ἐπιτρέψατέ μοι μιμητὴν εἶναι τοῦ πάθους τοῦ θεοῦ μου. Εἴ τις αὐτὸν ἐν ἑαυτῷ ἔχει, νοησάτω ὃ θέλω, καὶ συμπαθείτω μοι, εἰδὼς τὰ συνέχοντά με.

(5) Ἀπέχεσθε τῶν κακῶν βοτανῶν, ἅστινας οὐ γεωργεῖ Ἰησοῦς Χριστὸς, διὰ τὸ μὴ εἶναι αὐτὰς φυτείαν πατρός. Οὐχ ὅτι παρ' ὑμῖν μερισμὸν εὗρον, ἀλλ' ἀποδιϋλισμόν. Ὅσοι γὰρ θεοῦ εἰσιν καὶ Ἰησοῦ Χριστοῦ, οὗτοι μετὰ τοῦ ἐπισκόπου εἰσίν.

(6) Ἐπεὶ ἤκουσά τινων λεγόντων, ὅτι ἐὰν μὴ ἐν τοῖς ἀρχείοις εὕρω, ἐν τῷ εὐαγγελίῳ οὐ πιστεύω· καὶ λέγοντός μου αὐτοῖς, ὅτι γέγραπται, ἀπεκρίθησάν μοι, ὅτι πρόκειται. Ἐμοὶ δὲ ἀρχεῖά ἐστιν Ἰησοῦς Χριστὸς, τὰ ἄθικτα ἀρχεῖα ὁ σταυρὸς αὐτοῦ καὶ ὁ θάνατος, καὶ ἡ ἀνάστασις αὐτοῦ, καὶ ἡ πίστις ἡ δι' αὐτοῦ· ἐν οἷς θέλω ἐν τῇ προσευχῇ ὑμῶν δικαιωθῆναι.

(7) Ἐγὼ γὰρ καὶ μετὰ τὴν ἀνάστασιν ἐν σαρκὶ αὐτὸν οἶδα, καὶ πιστεύω ὄντα. Καὶ ὅτε πρὸς τοὺς περὶ Πέτρον ἦλθεν, ἔφη αὐτοῖς· λάβετε, ψηλαφήσατέ με, καὶ ἴδετε, ὅτι οὐκ εἰμὶ δαιμόνιον ἀσώματον. Καὶ εὐθὺς αὐτοῦ ἥψαντο, καὶ ἐπίστευσαν, κρατηθέντες τῇ σαρκὶ αὐτοῦ καὶ τῷ πνεύματι. Διὰ τοῦτο καὶ θανάτου κατεφρόνησαν, ηὑρέθησαν δὲ ὑπὲρ θάνατον. Μετὰ δὲ τὴν ἀνάστασιν συνέφαγεν αὐτοῖς καὶ συνέπιεν ὡς σαρκικὸς, καίπερ πνευματικῶς ἡνωμένος τῷ πατρί.

5. To what books of the New Testament does the language of Ignatius afford verbal parallels? Does he quote any book by name?

6. Explain *θεοφόρος, συμμύσται, περίψημα, ἀντίψυχον, μυστήρια κραυγῆς, λεοπάρδοις, φιλόῦλον, μηκέτι σαββατίζοντες.*

7. Discuss the use of the term *θυσιαστήριον* in Ignatius and in later writers respectively.

8. Compare the signification of the word *πλήρωμα* in the Epistles of Ignatius with its meaning (*a*) in the N. T., (*b*) in the Gnostic writers.

AMBROSE, DE SANCTO SPIRITU.

1. At what time was this treatise written? What heretical doctrines was it designed to combat?

2. Mention any passages which shew that Ambrose studied classical authors, and that he was acquainted with Greek.

3. What was Ambrose's view of the mutual relations of the three persons of the Blessed Trinity? How did it differ from the Greek mode of viewing this question? To what results has this difference led?

4. Translate and explain:

(1) Itaque sicut creata non potest dici sapientia, quae ex ore Dei procedit, nec Verbum, quod eructatur ex corde, nec virtus, in qua plenitudo majestatis aeternae est: ita etiam creatus non potest Spiritus aestimari qui ex ore Dei funditur; cum ipse Deus tantam ostenderit unitatem, ut effundere se de Spiritu suo dicat. Quo intelligamus quia etiam Dei Patris eadem gratia sit, quae Spiritus Sancti est, et quod sine incisione ac detrimento aliquo dividatur mentibus singulorum. Quod ergo de Spiritu Dei effunditur, nec inciditur, nec partibus aliquibus corporalibus comprehenditur, aut secatur.

(2) Simul illud adverte quia tertio repetita figura mysterii operationem Trinitatis expressit. Et ideo in mysteriis interrogatio trina defertur, et confirmatio trina celebratur: nec potest quis nisi trina confessione purgari. Unde et ipse Petrus in Evangelio tertio interrogatur utrum diligat Dominum; ut trina responsione vincula, quae Dominum negando contraxerat, et quibus se ipse ligavit, absolverentur.

(3) Aut si primo sine operatione Spiritus Sancti terram Pater fecit et Filius; postea vero Spiritus Sancti operatio copulabatur; videbitur id quod factum est, ejus quod accessit eguisse praesidio. Sed absit ut hoc quisquam existimet, ut operatio divina varietatem creatoris quam Manichaeus inducit, habere credatur,

(4) At qui aliter putant, in illud sacrilegium recidunt ut non distinguant Spiritum Sanctum qui prolativum Verbum putant in Patrem redire, prolativum Spiritum in Deum refundi.

(5) Videamus tamen ne terram illam dicat adorandam Propheta quam Dominus Jesus in carnis assumptione suscepit. Itaque per scabellum terra intelligitur, per terram autem caro Christi quam hodieque in mysteriis adoramus, et quam Apostoli in Domino Jesu, ut supra diximus, adorarunt; neque enim divisus est Christus, sed unus, neque cum adoratur tanquam Dei Filius natus ex Virgine denegatur.

5. What use does Ambrose make of the following passages of Scripture?

(*a*) Ecce tetigit hoc labia tua, et auferet iniquitates tuas. Esai. vi. 7.

(*b*) Emitte Spiritum tuum, et creabuntur. Ps. ciii. 30.

(*c*) Flumina ventre ejus fluent aquae vivae. Joh. vii. 38, 39.

(*d*) Templum Dei estis, et Spiritus Sanctus habitat in vobis. 1 Cor. iii. 16.

(*e*) Littera occidit, Spiritus autem vivificat. 2 Cor. iii. 6.

(*f*) Gladium Spiritus, quod est Verbum Dei. Eph. vi. 17.

(*g*) Et communicatio Spiritus Sancti cum omnibus vobis. 2 Cor. xiii. 13.

(*h*) Aqua, sanguis et Spiritus. 1 Joh. v. 8.

6. What reading had Ambrose before him in

(*a*) That which is born of the Spirit is spirit, &c. John iii. 6.

(*b*) The narrative of the miracle at the pool of Bethesda. John v.

(*c*) My Father which gave them me, is greater than all. John x. 29.

(*d*) To feed the Church of God. Acts xx. 28.

(*e*) Who is above all, God blessed for ever. Rom. i. 23.

(*f*) By his Spirit that dwelleth in us. Rom. viii. 11.

(*g*) In fleshy tables of the heart. 2 Cor. iii. 3.

(*h*) We serve the Lord Christ. Phil. iii. 3.

What testimony does Ambrose give to the presence in his text of the N. T. (*a*) of the concluding verses of St Mark's Gospel, (*b*) of the opening verses of St John viii., (*c*) of the passage "there are three that bear witness in heaven, &c." (1 John v. 7)?

WEDNESDAY, *June* 4, 1884. 9—12.

THE LIFE OF CHARLES THE GREAT, WITH ILLUSTRATIVE DOCUMENTS.

1. DRAW a sketch map of Europe, exhibiting the limits of the dominions of the Franks (1) at the death of Pepin, (2) at the death of Charles. How far did the influence of the Church extend beyond these limits?

2. Who were the Lombards? What elements of continuous weakness was there in their position? Give a short narrative of their relations with the Popes of Rome during the latter half of the eighth century and of the circumstances of Charles' marriage with the daughter of Desiderius.

3. Who were the *Avari*, as to his struggles with whom Charles wrote to Fastrada? Give details of the struggles, of Charles' treatment of the vanquished, and of Alcuin's action in the matter.

4. Describe the attitude which Charles occupied in reference to the privileges of the clergy, giving details of his work in the improvement of their education. In what respects did he permanently augment the influence of the Church of Rome within his dominions?

5. What was the meaning of the title *Patricius Romanorum* as given to Charles? What was the significance of his coronation as Emperor (1) as regards the Eastern Emperors, (2) as regards the Pope, (3) as regards Western Europe? Trace the chief events which led up to his coronation.

6. Compare the pontificates of Hadrian and Leo III. What do you conceive to have been the nature of the accusations brought against the latter? How did Alcuin treat the charges? What were the canons of Sylvester to which Alcuin referred?

7. Eginhard speaks of the interest which Charles took in astronomy. Illustrate this interest from his correspondence with Alcuin.

8. What proofs have we of the solicitude of Charles for the due observance of (1) Baptism, (2) the Celebration of the Eucharist, (3) Ordination.

9. To what do the two following capitula refer? (1) Ut confectis sacris mysteriis in missarum solenniis omnes generaliter pacem ad invicem praebeant. (2) De non recitandis nominibus antequam oblatio offeratur. What was the *oblatio*?

10. What was the character of Charles' enactments in regard to tithe, and what was their effect upon the consolidation of his dominions? How was the tithe divided? What line did Alcuin take in regard to these enactments?

11. What was the heresy of Felix and Elipandus, and how was it treated at Frankfort in 794? and how did this Council regard the canons of the second Council of Nicaea?

12. Judging from results, what appear to you to have been the most important facts of the reign of Charles the Great?

WEDNESDAY, *June* 4, 1884. 1.30—4.30.

THE LIFE OF QUEEN ELIZABETH, WITH ILLUSTRATIVE DOCUMENTS.

1. GIVE some account of the position of Elizabeth during the reign of her sister.

2. Explain her position at her accession. How far was the ecclesiastical policy of her reign shaped by the exigencies of that position?

What distinction may be drawn between the Reforming movements under Edward and under Elizabeth?

3. Give a summary of the Act 'to restore to the Crown all ancient jurisdiction, &c.' How far was the Royal Supremacy as settled in the reign of Elizabeth a return to, and how far a departure from, the condition of things in the remoter or more immediate past? What especial grievances was this Act designed to remedy?

iv. Compare the personal constitution of the Bench of Bishops at the accession of Elizabeth with its constitution at the death of Henry VIII. Compare it also with its constitution at the Restoration.

v. Contrast the characters and general sentiments of Parker and Grindal. What special difficulties had the former to encounter in consequence of this contrast? To whose influence was the promotion of Grindal mainly due?

vi. Give an account of the events which led up to the issue of the much controverted "Advertisements", and also (without discussion) the exact point of controversy regarding them.

7. Explain the provisions of the various Acts of this reign against Popish Recusants, stating clearly the circumstances to which their enactment was owing.

8. What evidence have we for the fact of the canonical Consecration of Parker? Give some account of the ceremonial which is stated to have been observed? What were the difficulties which the Act 8 Eliz. c. 1 was designed to meet?

ix. In what did the action of the House of Commons with reference to the Articles of Religion disappoint the Bishops? To what extent is the Act of 1571 still in force?

10. Give an account of what is known as the Vestment Controversy. What became of the chief actors in it? How did it affect the Universities?

11. Discuss the policy of Elizabeth in reference to the Prophesyings. By what considerations was she probably guided?

12. What light does the history of the Lambeth Articles throw on the prevalence of predestinarian views in the Church of England in this reign? To whom do we owe the rejection of those Articles? To what circumstances is the decline of predestinarian views in the latter years of Queen Elizabeth due?

13. Give the dates (1) of the first Puritan separation from the Church of England, and (2) of the formation of the first Presbyterian Church. What influence had Whitgift's policy and the publication of the Book of Discipline respectively on the fortunes of Puritanism?

SECTION IV.

THURSDAY, *June* 5, 1884. 9—12.

HISTORY AND DEVELOPMENT OF THE DOCTRINE OF GRACE AND FREE WILL TO THE END OF THE FIFTH CENTURY.

A.

1. WHAT different opinions as to man's free will were held (*a*) in the Jewish Church, (*b*) by heathen Philosophers? What should you say was the teaching of the Old Testament upon the subject?

Give some definitions of 'Free will'. And comment upon the following statement of Melancthon: 'In hoc loco cum prorsus Christiana doctrina a philosophia et humana ratione dissentiat, tamen sensim irrepsit philosophia in Christianismum, quia receptum est impium de libero arbitrio dogma et obscurata Christi beneficentia per profanam illam et animalem rationis nostræ sapientiam; usurpata est vox liberi arbitrii, a divinis literis, a sensu et judicio Spiritus alienissima, qua videmus sanctos viros non raro offensos esse.'

2. What has been understood by the term 'Grace'?

3. Shew how different theories as to the origin of the soul of man modified the teaching on original sin of different Fathers of the Church before Augustine.

4. Give Origen's doctrine of free will. How does he explain the passages in Rom. ix. bearing on the subject?

5. Give the characteristic Greek and Latin interpretations before Augustine of the following:

'*For that all have sinned.*' Rom. v. 12.

'*For as by one man's disobedience many*' &c. Rom. v. 19.

6. To whom, according to the Fathers before Augustine, is God's grace given?

7. How far would the following statements have been accepted by the Fathers before Augustine?

'As by Thy special grace preventing us Thou dost put into our minds good desires...'

'Colligimus peccatum originale morbum quidem esse, qui tamen per se culpabilis non est, nec damnationis pœnam inferre potest.'

B.

1. Shew the truth of the following statement:

'The Augustinian [system] is only guilty of an excess in carrying out certain religious ideas, the Pelagian offends against the first principles of religion and places itself outside of the great religious ideas and instincts of the human race.'

J. B. MOZLEY.

2. Define the theory of 'Perfectibility', and describe the attitude of (*a*) Pelagius and (*b*) Augustine towards it.

3. Shew from the history of the words 'Grace' and 'Nature' as used in the Pelagian controversy the importance of a clear understanding as to the definition of terms.

4. Comment on the following phrases: 'voluntas bona', 'da quod jubes', 'secundum merita', 'Dei gratiam promereri', 'possibilitatem, voluntatem, actionem'.

5. What opinions did Augustine hold as to (*a*) Baptism, and (*b*) the State of man in Paradise, with reference to 'Grace' and 'Free Will'?

6. What views are attributed to Pelagius with regard to Prayer, the limit of the Kingdom of Heaven, the Fall of Man?

7. What, according to Augustine, were the three main points of the Pelagian heresy, and what other points did he accuse the Pelagians of raising so as to prejudice discussion?

8. Translate:

'Considerandum quod et hic *προορισμὸς* et *πρόθεσις*, id est, praedestinatio et propositum simul posita sint, juxta quae operatur omnia Deus secundum consilium voluntatis suae. Non quo omnia quae in mundo fiant, Dei voluntate et consilio peragantur: alioquin et mala Deo poterunt imputari: sed quo universa quae facit, consilio faciat et voluntate, quod scilicet et ratione plena sint et potestate facientis. Nos homines pleraque volumus facere consilio: sed nequaquam voluntatem sequitur effectus. Illi autem nullus resistere potest, quin omnia quae voluerit faciat. Vult autem ea quaequumque sunt plena rationis atque consilii: vult salvari omnes, et in agnitionem veritatis venire. Sed quia nullus absque propria voluntate salvatur (liberi enim arbitrii sumus) vult nos bonum velle: ut quum voluerimus velit in nobis et ipse suum implere consilium.'

HIERON. I. *in Ephes.*

THURSDAY, *June* 5, 1884. 1.30—4.30.

THE CAMBRIDGE PLATONISTS, WITH SPECIAL REFERENCE TO THE WRITINGS OF WHICHCOTE AND SMITH.

1. ENUMERATE, giving the titles and dates of their works, the chief writers who are known as 'Cambridge Platonists'. How were they personally connected? State summarily the intellectual differences of Whichcote, Smith, More, Cudworth.

2. How do you account for the rise of the school? Characterize shortly its relation to the contemporaneous High Church and Puritan schools in principles of Politics, Philosophy, Religion. What do you consider to have been its main defect? Can you explain from this defect the nature and limits of its permanent influence on the English Church?

3. In what sense can Whichcote and Smith respectively be said to be 'Platonists'? Through what channels did Platonism influence Western Christianity? How far was the teaching of the Cambridge Platonists fitted to counteract that of Hobbes? Compare the relation of Cudworth and Hobbes to Bacon.

4. Give an outline of the subjects and circumstances of the correspondence between Tuckney and Whichcote. Explain 'Commencement Sermon', 'Commencement Question', 'at Trinity lecture', 'at Problems', '*fides carbonaria*', 'determined in the schools'.

5. State the five principles which Whichcote laid down about the rule of faith. What exceptions did Tuckney take to them? and how did Whichcote defend his position? Illustrate Whichcote's view of Holy Scripture from his other writings.

6. What use does Whichcote make of the phrase '*The spirit of man is the candle of the Lord*' (Prov. xx. 27)? Give the substance of Tuckney's criticism of Whichcote's teaching on the office of reason; and compare Whichcote's teaching on the subject with the teaching of Bacon and of Bishop Butler.

7. Explain and illustrate the following 'aphorisms' of Whichcote, stating if you can in what connexion they occur in his published Sermons:

(*a*) 'The same that is *Virtue* in the Subject, is *Grace* in the Original.'

(*b*) 'The State Here and the State Hereafter are *Homogeneal*.'

(*c*) 'In Morals it is most true, that every Man hath himself as he useth himself. God only can say *He will because He will.*'

(*d*) 'There is no *Shekinah* but by divine assignation.'

(*e*) 'No *Sign* can warrant our Belief unless it be in conjunction with a Doctrine worthy of God.'

8. What does Smith lay down as 'the fundamental articles of Christian religion'? How (generally) does he consider them to be connected together and established?

9. Discuss the effect of character on human perception of divine things. What dispositions were held to be generally antecedent to prophecy by Jewish writers? By what criteria do you distinguish prophecy from enthusiasm?

10. How does Smith deal with the objection to the immortality of the soul drawn from the strong sympathy of the soul with the body? Does his reasoning appear to you to be satisfactory? How would you supplement it?

11. Where does Smith look for the final evidence of the being and nature of God? In what does the evidence consist? What do you understand by 'the glory of God'?

12. How does Smith describe 'the righteousness of God'? Give his summary of the effects of Christ's work.

13. Describe the most popular mistakes as to the nature of religion. Shew that true religion must furnish personal strength and a right interpretation of nature.

14. Give some account (*a*) of Rust's 'Resolution concerning Origen and the chief of his opinions';

and (*b*) of the plan of Cudworth's 'Intellectual System of the Universe'.

FRIDAY, *June* 6, 1884. 9—12.

THE HISTORY OF CHRISTIAN WORSHIP, WITH SPECIAL REFERENCE TO THE LITURGY OF ST MARK, AND COGNATE LITURGIES; THE PRE-REFORMATION SERVICES OF HOLY BAPTISM AND CONFIRMATION (WITH DANIEL'S CODEX LITURGICUS, TEXT AND NOTES), AND THE HISTORY AND CONTENTS OF THE BOOK OF COMMON PRAYER.

[*Candidates are requested not to attempt more than* three *out of the first* six *questions.*]

1. GIVE (in the original words, if you can) the teaching of St Paul's epistles on the part to be taken in Public Worship by (*a*) the minister, (*b*) the laity, and (*c*) the two sexes, respectively.

2. Draw a plan of a Christian Church, shewing the arrangements previous to the year 350 A.D. State what are your authorities.

3. Give a short account of the following:

(*a*) the Synagogue 'Eulogies',

(*b*) the first two nights of the Passover;

and shew how far either of them is related to forms of Christian Worship.

4. Mention any hymns of St Ambrose. How do pseudo-Ambrosian hymns differ generally from the genuine ones? What is known of the history of the *Te Deum?*

5. Give the grounds of the following statement: 'To the present time the services of the Church of Rome bear clear traces that Greek was at first the language of its Liturgy.'

6. What do we learn from St Irenæus of the Eucharistic service in his days?

7. Explain the following terms:

συνάπτη, διακονικόν, εἴσοδος, δίπτυχα, embolismus, benedictiones episcopales.

8. Give in tabular form a statement of the principal parts of the Liturgy of St Mark. Point out the most important of its peculiarities.

9. Translate the following passages, giving explanatory and illustrative notes:

(*a*) *καὶ μετὰ τὸν τρισάγιον, σφραγίζει ὁ ἱερεὺς τὸν λαόν, λέγων· Εἰρήνη πᾶσιν. Ὁ λαός. Καὶ τῷ πνεύματι σοῦ. Εἶτα τὸ Πρόσχωμεν, ὁ Ἀπόστολος, ὁ πρόλογος τοῦ Ἀλληλούϊα. Οἱ διάκονοι κατὰ ῥητὸν λέγουσι· Κύριε εὐλόγησον. Ὁ ἱερεὺς λέγει· Ὁ Κύριος εὐλογήσῃ καὶ συνδιακονήσῃ ὑμῖν τῇ αὐτοῦ χάριτι, νῦν καὶ ἀεί, καὶ εἰς τ.*

(*β*) *ὡς προσεδέξω τὰ δῶρα τοῦ δικαίου σοῦ Ἄβελ...*

What other Biblical characters are mentioned in this place? Quote the parallel passage in the Roman Canon.

(*γ*) *Ὁ δὲ ἱερεὺς λέγει ἐπευχόμενος· Ὡσαύτως καὶ τὸ ποτήριον μετὰ τὸ δειπνῆσαι λαβών, καὶ κεράσας ἐξ οἴνου καὶ ὕδατος, ἀναβλέψας εἰς τὸν οὐρανὸν πρὸς σὲ τὸν ἴδιον Πατέρα, Θεὸν δὲ ἡμῶν καὶ Θεὸν τῶν ὅλων, εὐχαριστήσας, εὐλογήσας, ἁγιάσας, πλήσας Πνεύματος ἁγίου, μετέδωκε τοῖς ἁγίοις καὶ μακαρίοις αὐτοῦ μαθηταῖς καὶ ἀποστόλοις...*

Give the corresponding part of the formula of Institution from some other Liturgy, and mention from which it is that you are quoting.

(*δ*) *μηδεὶς δὲ ἐσθιέτω ἐξ αὐτῶν τῶν ἀμνήτων, ἀλλὰ μόνοι οἱ βεβαπτισμένοι εἰς τὸν τοῦ Χριστοῦ θάνατον. εἰ δέ τις ἀμύητος κρύψας ἑαυτὸν μεταλάβοι, κρίμα αἰώνιον φάγεται, ὅτι μὴ ὢν τῆς εἰς Χριστὸν πίστεως μετέλαβεν ὢν οὐ θέμις, εἰς τιμωρίαν ἑαυτοῦ· εἰ δέ τις κατὰ ἄγνοιαν μεταλάβοι, τοῦτον τάχιον στοιχειώσαντες μυήσατε, ὅπως μὴ καταφρονητὴς ἐξέλθοι.*

(*Constit. Apost.*)

Illustrate this, by quotation if possible from (*a*) the Liturgy of St Mark and (*b*) any other sources.

10. Mention any points of similarity to the Liturgy of St Mark which you observe in that part of the 'Order of the Administration of the Lord's Supper' (1662) which precedes the prayer 'for the whole state of Christ's Church.'

11. What special duties are assigned to the Deacon in Greek Liturgies? What references to the *ἀρχιδιάκονος* and *ὑποδιάκονος* are contained in the *Rotulus Vaticanus*?

Or,

Give a short account of the manuscript authority for the text of the Liturgy of St Mark. What extant liturgies are most nearly akin to it?

12. What information as to the administration of Holy Baptism is given in the recently discovered '*Teaching of the Apostles*'?

13. What account of the preparation and instruction of candidates for Baptism may be gathered from the writings of St Augustine, or of St Cyril of Jerusalem?

14. Under what main divisions did the mediaeval services connected with Baptism group themselves? Give a short description of a service '*ad Fontem*' from the Gelasian Sacramentary or from some book formerly used in England.

15. What directions have been given in England on the subject of Baptism by lay people? What indications of the Bishop's interest or responsibility in this sacrament are given in ancient or modern authorities?

16. Explain the following:

'*N.* Abrenuncias Sathanae. *Respondeant compatrini et commatrinae.* Abrenuncio.' —'*Post haec mittat sacerdos oleum sanctum cum ipsa billione quae est in vase ejus in aquam.*'—'*non dicitur iteratum quod nescitur fuisse collatum, et ideo sub forma praedicta baptizantur infantes expositi, de quorum baptismo probabiliter dubitatur, sive inveniantur cum sale vel sine sale.*'

17. In what respect were the Baptismal Offices of the Church of England modified or enriched in the seventeenth century?

18. '*Et interrogantibus diaconibus nomina singulorum, pontifex, tincto pollice in chrismate, facit crucem in fronte unius, similiter per omnes singillatim.*' (Sacr. Gregor.) To what extent have the parts here assigned to the deacons and the bishop been observed in England or elsewhere?

Or,

'*Primitus inpone manum super capud infantis et tangis eum vel eam vel eos, et dices,* Dominus vobiscum. Et cum spiritu tuo. Omnipotens sempiterne Deus, qui regenerare dignatus es hunc famulum tuum,' *&c.* State what inferences you should draw from the grammatical peculiarities of this passage as to its origin and date.

19. Which of the Latin Confirmation Offices cited by Dr Daniel contain (*a*) any traces, or (*b*) express mention of imposition of hands?

20. Give a general history of the "Litany" from its earliest form to its modern English form.

FRIDAY, *June* 6, 1884. 1.30—4.30.

WRITE an Essay on *one* of the following subjects:

1. *The idea of Sacrifice in the early Liturgies.*

2. "*Works done before the grace of Christ and the inspiration of his Spirit...have the nature of sin.*"

3. *Freedom in religious opinion.*

SPECIAL EXAMINATION IN MORAL SCIENCES FOR THE ORDINARY B.A. DEGREE.

FRIDAY, *May* 30, 1884. 9—12.

POLITICAL ECONOMY.

1. EXPLAIN the division of Capital into Fixed and Circulating, and into Remuneratory and Auxiliary.

Give examples to shew whether or not these division lines coincide with each other.

2. We sometimes find whole villages or towns nearly given up to one form of production. Explain the principal causes of such a state of things, and its resultant advantages and disadvantages.

3. Explain the meaning of the technical expressions, "Law of Increasing Return," "Law of Normal Value."

4. On what is called the Ricardian Theory of Rent what should you expect to be the result of some discovery,—say a new kind of manure,—which was only effective on the inferior soils?

5. What is meant by Market Value, and with what is it contrasted? What kinds of articles should you expect to shew the greatest stability of Market Value?

6. Give some account of the constitution and resources of the larger English Trades Unions.

7. Explain generally what you understand by an Inconvertible Currency. Can you give any instances to shew that it is not necessarily a debased currency?

8. Describe the ordinary functions of an English Bank, pointing out which of these functions are of recent growth, and which, if any, are specially characteristic of this country.

9. On what grounds would you argue against the possibility of any country permanently engrossing more than its share of money? Are there any countries which require exceptional consideration in this respect?

FRIDAY, *May* 30, 1884. 1—4.

POLITICAL ECONOMY.

1. DESCRIBE the principal causes which may produce (1) a permanent, (2) a temporary low rate of Interest in any country.

2. What is a Bill of Exchange? How does it differ from a Cheque, and from a Promissory Note?

3. Enumerate the principal items which make up the sum total of the pecuniary obligations of one country to another at any given time.

In comparing the mutual obligations of this description, between England and Australia, what would you expect to find as the special characteristics in each case?

4. What do you understand by Direct Taxation; and what are the principal such taxes at present in England?

5. In what principal cases, and why, does a tax primarily levied on one person ultimately fall on some one else?

What should you expect would be the immediate and ultimate effects of a considerable tax on the manufacture of salt in England?

6. What are the principal examples, in present or former times, in England of "Taxes on Contracts," and "Taxes on Communication"?

7. Examine generally the economic consequences of laws affecting Inheritance and Bequest. To what extent do you conceive that modern English feeling on this subject is itself the result of legislation?

8. What do you suppose to be meant by "Fair Trade," and what are the objections to it?

Suppose that England and Ireland were now distinct States, what do you conceive would be a fair sample of such "Fair Trade" regulations as might be carried out by each country towards the other?

9. Explain the meaning of "Settlement," "the Boarding out system," and "the Workhouse Test," in the history of our Poor Law Legislation.

SATURDAY, *May* 31, 1884. 9—12.

POLITICAL ECONOMY.

1. GIVE a brief sketch of what Adam Smith regards as the Natural Progress of Opulence.

2. Adam Smith says that neither the great proprietors nor the merchants "had either knowledge or foresight of that great revolution which the folly of the one and the industry of the other was gradually bringing about." Explain the grounds of this statement.

3. "Money, like wine, must always be scarce with those who have neither wherewithal to buy it, nor credit to borrow it." Work out this statement into its main consequences; against what opinions is it aimed?

4. To what extent is the opinion correct that Adam Smith was in all respects a thorough going Free trader?

5. Give a short historical account of the Bank of Amsterdam, explaining clearly the circumstances which led to its establishment.

6. What errors does Adam Smith attribute to what he calls the Agricultural System of Political Economy?

7. How has jealousy of Holland and Flanders been influential in the commercial legislation of England?

8. In what way is it maintained that fiscal causes have had a share in producing a taste for Port wine in England, and Madeira in America? Can you quote any other analogous instances?

9. What has Adam Smith to say as to the advisability of a bounty on the export of corn, and a seignorage on the coinage of gold?

FRIDAY, *May* 30, 1884. 9—12.

LOGIC.

1. BY the analysis of an argument shew that there are three mental operations concerned therein, and explain what they are.

2. Give a short account of the views of Logic implied in the phrases, "Logic of Truth," "Logic of consistency," used by Mill.

3. What is the "extension," what the "intension" of a term? Shew that as the latter is increased or diminished the former is generally diminished or increased.

4. State the Dictum de Omni et Nullo.

What two propositions does Jevons substitute for it?

How does Mill connect the dictum with a particular view of the interpretation of (the terms of) a proposition?

5. What are the laws of Definition?

Is definition of *names* or of *things*? give reasons for your opinion.

6. What are the different Oppositions between propositions?

Shew that of two contradictory propositions one must be true and the other false. What kind of argument is based on this fact?

7. Shew that if one premiss of a syllogism is particular the conclusion is particular. If the conclusion of a syllogism is a universal affirmative determine the mode and figure.

8. What is a hypothetical syllogism?

What is the Logical fallacy involved in arguing from the affirmation of the consequent to the affirmation of the antecedent?

9. State in syllogistic form, and examine the validity of the following:

A man, indeed, who has been accustomed to liberty cannot be happy in a state of slavery: many of the negroes, however, may be happy in a state of slavery because they have never been accustomed to enjoy liberty.

For those who are bent on cultivating their minds by diligent study the incitement of academic honours is unnecessary: and it is ineffectual for such as are indifferent to mental improvement: therefore the incitement of academic honours is unnecessary or ineffectual.

FRIDAY, *May* 30, 1884. 1—4.

LOGIC.

1. DEFINE *Causation*, in the sense in which you conceive it; and shew, in particular, whether the belief in it, in that sense, is really universal.

2. Explain generally how Inductive Logic differs from ordinary Logic, in respect of its object and methods.

3. Exhibit the difficulties experienced in Definition, and the faults most likely to be committed in the process, by proposing a definition of *College*.

4. State the case (without further explanation) as strongly as you can for and against the doctrine that the Syllogism is a *Petitio Principii*.

5. During a recent fog in London the mortality rose about 50 p.c. in one week: indicate the sort of Inductive methods to which you would resort in order to determine whether this was a case of causation. Is your result perfectly general, in the sense of assuming no previous physical or medical knowledge whatever?

6. "Why does the thermometer stand so low in the Hospital in summer?" (*a*) Because the air is so cool; (*b*) Because of the good ventilation; (*c*) Because it would not otherwise be healthy; (*d*) Because the medical authorities have ordered it. In what sense exactly are these "explanations"? Is there any common element in them all?

7. Illustrate the principles to be aimed at in Classification by giving a classification of *Games;* can you illustrate here the distinction between a natural and an artificial system?

8. 'There is no such thing as Chance'; 'all knowledge of facts is only probable.' Are these frequent assertions inconsistent?

9. Give some examples of what is called 'deception,' in the case of each of our senses, examining to what extent they deserve to be so called.

SATURDAY, *May* 31, 1884. 9—12.

LOGIC.

1. WHAT do words in their primary signification stand for? by what tacit references is their signification extended?

2. "The far greater part of words are general terms: which has not been the effect of neglect or chance, but of *reason* and *necessity*."

Shew how these contribute to the result.

3. "Universality belongs not to things themselves, which are all of them particular in their existence, *even those words and ideas which in their signification are general*."

Explain how these words and ideas are, and come to be, general; and how universality is yet denied to them.

4. Reconcile the following passages: "the end of speech is that these sounds (words) may make known his (the speaker's) ideas to the hearer;" "words, being sounds, can produce in us no other simple ideas than of those very sounds."

5. How does Locke account for the number of words in a language for which no exact equivalents are to be found in another language?

6. Shew that there is nothing "essential" to individuals.

How does Locke argue *from hence* that even real essence relates to a sort, i.e. to a general abstract idea?

7. What does Locke mean by saying that "all our affirmations are only in concrete"? What kind of predication is here excluded, and why?

"A man is rational:" what is Locke's explanation of this proposition? Compare it with Mills' explanation of "All men are mortal."

8. How is it we are led to think that a change in our idea of a substance does not change the species?

"If well considered it will be found quite a different thing to argue about 'gold' in name, and about a parcel of the body itself:" examine whether this is or is not in agreement with Locke's explanation of the meaning of a proposition.

9. Where does Locke place general certainty?

Does he herein ignore general results of induction?

MORAL SCIENCES TRIPOS.

SATURDAY, *May* 17, 1884. 9 A.M.—12 M.

PSYCHOLOGY.

1. WHAT do you understand by the Analysis of mental states? How is Analysis related (*a*) to the discrimination, (*b*) to the assimilation or classification of the phenomena concerned?

2. Examine Bain's doctrine of Relativity. To what extent is it true that constant sounds are not heard, and how would you explain the phenomenon?

3. Give a brief account of the Sensations of Pitch, and state what is known of their physiological concomitants. Compare the series of pitch-sensations with that of colour-sensations.

4. What is known respecting the Muscular Sense? What part is played by the muscular sensations of the eye in the development of the visual perception of space?

5. Analyse the state of mind known as Expectation, and compare the expectation of an event, (*a*) with the remembrance of one, and (*b*) with the mere imagination of one. How do the proportions of these states alter as life advances, and how would you explain the alteration?

6. Describe briefly the psychological questions connected with Judgment, distinguishing between the psychological and the logical treatment of judgment.

7. To what extent do you consider the analysis of an Emotion to be possible? Point out the bearing of your answer on the problem of classifying the Emotions.

8. Give a brief account of the state of Desire, indicating its precise relation to Feeling and to Voluntary Action.

9. What do you understand by Instinct and by Habit, and how do you conceive them to be related to one another? Examine the following: "Voluntary Action has both its origin and its termination in Instinctive Action."

SATURDAY, *May* 17, 1884. 1—4 P.M.

LOGIC.

1. IN what ways is Formal Logic embarrassed by the admission of Particular Propositions? Have they any distinct value in Logic as an Art?

2. What relation of s (=not S) to p (=not P) is inferrible from All S is P? Indicate the assumptions involved in inferring the passivity of Matter from the activity of Mind.

3. Shew that in no case does information that both the premises of a correct syllogism are materially false lead to knowledge that the conclusion is false.

4. Examine the charge of *petitio principii* brought against the syllogism. Can it be met by insisting that in really valuable syllogisms the middle term expresses the real cause of the connexion between the other two?

5. We can put categorical syllogisms into hypothetical forms but cannot reverse the process. Examine this position, with examples.

If A is, B is not: give the corresponding A, I, O; also the contradictory, the contrary, and the contrapositive of the original.

6. What two different oppositions are the terms *a priori* and *a posteriori* used to express? What do you understand by *a priori* objections to (1) a Reform Bill, (2) the authenticity of a treatise?

7. "The steps in the process of erecting a Law of Nature are four, Observation, Theory, Analysis, and Experiment." Explain, and compare with Mill's and Whewell's expositions. Have you any objections to these names for the four stages?

8. What is meant by Classification by Series, and what is its value in relation to Inductive enquiries?

9. State and illustrate the Method of Residues, pointing out its precise place in Mill's theory of Inductive Methods. Consider the relation of the Method of Residues to the Method of Means as defined by Whewell.

MONDAY, *May* 19, 1884. 9—12 A.M.

METAPHYSICS.

1. "THE substance of Mind cannot be known."

Examine the truth and importance of this proposition: considering (1) what knowledge of the substance of mind certain modern philosophers have supposed themselves to possess, and (2) how this supposed knowledge can be shewn to be impossible.

2. "The external senses...make us perceive...they give us a *conception* and *invincible belief* of the existence of external objects." REID.

Discuss this view of perception and compare it with Hamilton's.

3. By what method can controversies about first principles be determined? Compare Reid's expressed view on this question with that implicitly or explicitly adopted by Mill, distinguishing different kinds of first principles.

4. Examine the mutual relations, both *genetic* and *logical*, of the notions, *Space*, *Matter*, *Motion* and *Force*: comparing Kant's views with Spencer's.

5. Explain the following propositions, and discuss the grounds on which they have been affirmed, distinguishing different meanings of the term "inconceivable."

(*a*) "Extension alone will exhibit to us two pairs of contradictory inconceivables."

(*b*) "It is impossible to conceive motion becoming rest or rest becoming motion."

6. "I clearly perceive that there is more reality in the infinite substance than in the finite, and therefore that in some way I possess the perception of God before that of myself." DESCARTES.

Explain Kant's view as regards the proposition thus affirmed by Descartes; and compare it with Hamilton's or Mill's.

7. (*a*) "Every effect has a cause."

(*b*) "The same causes have the same effects."

(*c*) "The course of nature is uniform."

Consider (1) how far any one of these three propositions is identical with or implied in any other, (2) so far as they are different, how far their grounds of certainty are similar or dissimilar.

8. Distinguish the different propositions, actually held by philosophers, which may be implicitly denied by affirming that "all knowledge is relative": and examine the arguments that have been urged in favour of the one which you consider most important.

MONDAY, *May* 19, 1884. 1—4 P.M.

MORAL AND POLITICAL PHILOSOPHY.

1. Is Disinterested Benevolence a Psychological fact? How is Ethical Theory affected by the answer to this question?

2. Examine the relationship between Primariness and Authority in Rules of Conduct. Are the laws of Morality the source of minor rules of action, or their issue?

3. On what grounds did Butler object to making the balance of happiness the sole determinant of the moral character of actions? What other objections have Intuitionalists expressed?

4. Kant's Ethical Theory has been regarded as untenable because his principle is merely formal and his motive power merely subjective. Explain and criticize.

5. What points of Bentham's Utilitarianism are given up by Mill? What further concessions might be made by the recognition of Evolution?

6. Examine the claims of Hedonists to make use of the maxims of common sense morality.

7. Define Courage: examine the grounds of its claims to be considered a Moral Virtue, and the limitations of its moral excellence.

8. "No taxation without representation." "All capable citizens should have votes." Discuss these maxims.

9. Discuss the moral objections to the ownership of persons; and consider how far they apply to the private ownership of land.

10. Give a brief general account of the relation of Punishment to Crime, according to the Preventive and the Retributive Theories of Punishment respectively: and consider especially whether any differences in the allotment of Punishment in respect of amount of temptation result from the divergence between these theories.

TUESDAY, *May* 20, 1884. 9—12 A.M.

POLITICAL ECONOMY.

1. INVESTIGATE the best definition of Capital, for the purposes of economic reasoning: and consider whether (*a*) land, (*b*) consols, (*c*) old china, (*d*) natural and acquired skill of artisans are to be regarded as capital.

2. It has been said that in England now "the rich are becoming richer and the poor poorer." Point out any ambiguity that you find in the statement: and, taking it in any precise sense which the words admit, analyse the causes operating *for* and *against* the result thus described.

3. Examine the precise bearing of the Law of Diminishing Returns on Rent. What would be the effect on the total rental of England if great improvements were made in the means of internal communication?

4. To what extent and under what conditions does Cost of Production determine Value? Illustrate by reference to (*a*) the price of books, (*b*) the value of silver. Consider by what measures, if any, the Government of India could materially counteract the present depreciation of silver. Define the term Mint Price.

5. Explain the way in which Inconvertible Notes become depreciated. How far can the premium on gold be regarded as a trustworthy measure of the amount of depreciation?

6. Account for the fact that whilst the Bank Rate has during the last fifty years fluctuated between 2 and 10 per cent., the interest from consols has only deviated by a fraction from 3 per cent. on the purchase money.

7. Are wages paid out of Capital or out of the price of the produce, or both? Consider how your answer affects the power of Trade Unions to raise wages.

8. Under what conditions does the law of equality of profits hold good? Illustrate by discussing different cases of the transference of taxes from producer to consumer.

9. What are the disadvantages of National Debts, and what do you consider the best method of paying them off?

TUESDAY, *May* 20, 1884. 1—4 P.M.

GENERAL PHILOSOPHICAL QUESTIONS.

1. DISCUSS the practical value of political ideals. It is often said that experience is the final test of the validity of such ideals. Consider in what sense (if any) this proposition is true.

2. Discuss, from the point of view of empirical psychology, the truth of Pessimism: and consider the ethical consequences of adopting a pessimistic view of human experience.

3. Discuss the comparative advantages of taking the conception (*a*) Right or (*b*) Good as the fundamental notion in Ethics: and investigate the mutual relations of the two notions, if they are distinguished and employed together.

4. Examine the doctrine that "in its essential character, Belief is a phase of our active nature."

5. Discuss the *metaphysical*—as distinct from *psychological*—importance of inquiring into the historical origin of any of the faculties or fundamental conceptions of the mind.

6. Discuss the importance in metaphysics of good definitions and the best method of obtaining them; illustrating by reference to metaphysical controversies which have to an important extent turned on the misunderstanding by one thinker of the terms used by another.

7. Discuss the tendency of ordinary general reasoning to become symbolical; and examine the gain and loss (if any) which this change involves.

8. "And coxcombs vanquish Berkeley with a grin."

Under what conditions, if any, is the line of argument symbolized by a "grin" appropriate? Throw the argument into as philosophical a form as possible.

9. Illustrate the proper sphere of 'Deductive' and 'Inductive' methods respectively in Economic discussion, by considering the application of the two methods to the department of Currency.

10. How far are "economic" and "non-economic" considerations capable of being clearly distinguished in discussing questions of governmental interference? Illustrate by reference to the special case of the English Factory Acts.

WEDNESDAY, *May* 21, 1884. 9—12 A.M.

HISTORY OF MODERN METAPHYSICS.

1. WHAT does Locke mean by a complex idea and how many kinds of complex ideas does he recognise? Is his account of the relation of these to simple ideas intelligible and consistent?

2. Give briefly Locke's doctrine of Essences and estimate its importance in the development of philosophy and of logic.

3. Examine Locke's account of the origin or beginning of knowledge, commenting on his use of the terms 'sensation', 'idea', 'quality', and 'perception', in connection one with another. Compare his use of these terms with that of Descartes.

4. Give a summary of Berkeley's argument in proof of the proposition that the *esse* of things is *percipi*, and compare it in respect of its positive or constructive value with Mill's psychological theory of the External World.

5. Give an account of Berkeley's theory of Power or Causal Activity and consider the force of Hume's objections to it. In what different ways do Berkeley and Kant call in the aid of an active spiritual principle in developing their theories of perception?

6. How, according to Berkeley, do we come to know the existence of other finite minds? Comment on the connection in his system between finite minds and the Infinite Mind.

7. Examine Hume's distinction between impressions and ideas, and his conception of the relation between the two.

8. What does Hume include under the head of 'philosophical relations', and which of these does he ultimately accept? Compare his view with that of Locke. Is his account of ideas of relation consistent with the premises with which he sets out?

9. What, according to Hume, is the logical connection between the idea of identity and that of cause and effect? Compare his view of the subject with that of any later thinker.

WEDNESDAY, *May* 21, 1884. 9—12 A.M.

HISTORY OF MODERN ETHICAL AND POLITICAL PHILOSOPHY. (ESSAYS.)

[*Essays are to be written on either* two *or* three *of these subjects.*]

1. "IF we wish to recognise in their most characteristic representatives the two most important influences on thought which prevailed in England at the close of the eighteenth century we must contrast Burke with Bentham." ADOLF HELD.

2. "The Justice of Godwin is identical with utility."

3. "The book of Montesquieu with all its defects still proceeded on that Historical Method before which the Law of Nature has never maintained its footing for an instant." "Perhaps the question most frequently asked nowadays is not what is the value of these opinions [of Rousseau] but what were the causes which gave them such overshadowing prominence a hundred years ago."

4. Examine the sources and the subsequent influence of Locke's views on property, noticing any survivals in modern forms of Socialism.

5. Compare the views of Burke on the English Revolution, the French Revolution and (if you like) the Revolt of the American colonies.

6. Explain the central propositions of the Social Contract of Rousseau, and discuss the following passage:

"Rousseau borrowed from Hobbes the true conception of sovereignty, and from Locke the true conception of the ultimate seal and original of authority, and of the two together he made the great image of the sovereign people."

WEDNESDAY, *May* 21, 1884. 1—4 P.M.

ANCIENT PHILOSOPHY.

1. EXPLAIN Aristotle's view of the relation of Dialectic to Science; compare it with Plato's; and discuss the connection of either view with the Socratic method of investigation.

Explain the statement διαλεκτικὸς ὁ προτατικὸς καὶ ἐνστατικός.

2. Explain Aristotle's classification of categories; and discuss its adequacy for the purpose for which it was intended. Compare it with the Stoic classification of categories. To what extent is Porphyry's list of Five Predicables Aristotelian? and what, in Aristotle's view, is the relation of this list to the classification of the categories?

3. Note any peculiarities in Aristotle's analysis of a proposition, and in his treatment of the Quantity and Modality of propositions. To what extent did he recognize the distinction between categorical and hypothetical reasoning?

4. Explain the distinction and relation between συλλογισμὸς and ἀπόδειξις, and discuss Aristotle's view of the different kinds of premises required for deductive science. Discuss especially his view of the relation of Definition to demonstration; and to predication.

5. Criticize Aristotle's general view of sense-perception, explaining the terms αἰσθητικὴ μεσότης and αἰσθητὸν εἶδος. Discuss in particular his account (*a*) of the diverse qualities apprehended by touch, and (*b*) of the perception of what Locke called "primary qualities." What does he mean by speaking of qualities ὧν λόγος τις ἡ σάρξ?

6. Give a brief account of the state in which Aristotle found Psychology, noticing any doctrines of his predecessors which had an important influence on post-Aristotelian thought.

7. Examine Aristotle's view of Νοῦς: discussing especially the relation of νοῦς (*a*) to other mental faculties or processes, (*b*) to the human organism, and (*c*) to the νοητά.

8. Examine Aristotle's use of the terms ἀρχή, αἰτία, οὐσία, τὸ εἶναι. Discuss his theory of the four kinds of cause and the importance of each in his system.

9. Discuss the conception of Matter (ὕλη) in Greek Philosophy, distinguishing different schools.

WEDNESDAY, *May* 21, 1884. 1—4 P.M.

POLITICAL ECONOMY. (ESSAYS.)

[*Essays are to be written on either* **two** *or* **three** *of these subjects.*]

1. "THE goal of Political Economy must be the reconciliation of conflicting class interests, the elevation of the poor and so-called working classes....in fine Political Economy must be a means to the attainment of the moral and religious ideals which form the special goal of human development." (Schönberg's *Handbuch.*) Discuss the question how far moral and religious ideals come within the scope of Political Economy, giving illustrations from leading economists.

2. Investigate the factors of economic progress, giving as far as possible historical illustrations, with the especial view of determining how far the economic functions of government tend to change in kind or in degree, relatively to wealth and population, in the course of such progress.

3. "Professor Nasse pointed out to English students that the English and German land systems were the same, and that in England also the open-field system of industry was the shell of the mediaeval village community." Explain Nasse's views and give some results of recent criticism on the subject.

4. Discuss the meaning of the phrase "Free Trade in Land." Examine the probable effects of the legislative changes to which the term has been applied on (*a*) the size of estates, (*b*) compensation for improvements, (*c*) the growth of the rural population.

5. Examine the different economic functions performed by Bankers in different ages and countries; consider the special grounds on which governmental interference, to secure the more efficient performance of any of these functions, is held to be desirable; and make a critical comparison of different methods, actual or professed, of regulating the issues of convertible bank notes.

6. Discuss the principle "that taxation should be equal"; and the practical difficulties in the way of realizing it.

FRIDAY, *May* 23, 1884. 9—12 A.M.

HISTORY OF MODERN ETHICAL AND POLITICAL PHILOSOPHY.

1. EXAMINE the views of Locke on the limits of the extent of legislative power, especially in taxation and the delegation of authority.

2. Explain and criticise Montesquieu's division of governments, and compare it with other divisions with which you may be acquainted.

3. Examine the utility and ethical foundation of legal fictions, referring especially to Montesquieu's views, and comparing the opinions of different writers on the subject.

4. Examine Hume's dictum that the purpose of all Government is to support the Bench of Judges; indicating especially the assumptions involved as to the prae-political condition of man.

5. What are Hume's grounds of submission to authority? Compare them with Rousseau's answer to the question, How can the member of an outvoted minority be considered to be free?

6. Compare the views of Locke, Rousseau, and Godwin on the Right of Insurrection, and on the best method of effecting Revolutions.

7. "In reality nothing can appear more wonderful to a careful enquirer than that two ideas so incompatible as man and rights should ever have been associated." (Godwin.) Give and examine Godwin's reasoning.

8. What was Burke's opinion on the basis of representative government and why did he so strongly disapprove of the French National Assembly?

9. "Prescription is the most solid of all titles not only to property, but what is to secure that property, to government." (Burke.) Discuss the statement and examine the ethical validity of prescription.

10. Compare briefly the progress of utilitarianism in Politics and in Ethics in English thought in the eighteenth century.

FRIDAY, *May* 23, 1884. 9—12 A.M.

HISTORY OF MODERN METAPHYSICAL PHILOSOPHY (ESSAYS).

[*Essays are to be written on either* two *or* three *of these subjects.*]

1. THE different tendencies of thought in Locke's philosophy; their sources; and the extent to which they can be made to harmonize in a consistent system.

2. "The inconsistencies or accidents of Locke's system are its most valuable part" (GREEN).

3. The influence of Berkeley's Idealism on subsequent speculation.

4. The consistency of Berkeley's theory of the external world with common sense and scientific beliefs respecting the permanence and identity of things, and the existence of laws of nature.

5. A critical examination of Hume's account of the nature and origin of our ideas of Space and Time.

6. The connexion between Hume's fundamental principles and Mill's system of Inductive Logic.

FRIDAY, *May* 23, 1884. 1—4 P.M.

ADVANCED PSYCHOLOGY AND PSYCHOPHYSICS.

1. Do you regard the idea of a single subject, over and above the multitude of successive mental states, as a necessary assumption in psychology? Point out the bearing on the question of the facts described by the expression "the unity of consciousness."

2. What is meant by the threshhold or liminal value (*a*) of a stimulus, and (*b*) of a difference between stimuli, and what are the chief difficulties in determining these values in any individual case? Discuss the meaning of the expression "the negative value of a sensation."

3. What are the most important distinguishing marks of impressions and images? Explain how it happens (*a*) that we so rarely mistake faint impressions for images, and (*b*) that we are able to imagine or represent vivid impressions as such without taking our images to be impressions.

4. Unfold and examine the doctrine of identical retinal points.

5. To what extent are we able to estimate subjectively length of time or duration? What length of interval are we best able to measure independently of objective standards, and how would you account for the fact?

6. What different ways are there of conceiving of the process of mental reproduction or revival of impressions? Are the commonly accepted Laws of Association ultimate laws; if not, how would you resolve them?

7. Discuss the relation of Emotion to what are called its "Bodily Concomitants," considering to what extent these latter, or their psychical effects, constitute an integral part of the emotion, and contribute its characteristic quality.

8. Discuss the psychological correctness of calling reason a distinct and unique faculty. Comment, in this connection, on the expressions "sensuous sign," "sense-judgment," "logic of feeling."

9. Give a brief account of the mental state known as sense or feeling of effort under its different forms, and in connection with its probable physiological conditions. What are the main modifications of the feeling in abnormal states?

FRIDAY, *May* 23, 1884. 1—4 P.M.

ADVANCED LOGIC AND METHODOLOGY (ESSAYS).

[*Essays are to be written on either* **two** *or* **three** *of these subjects.*]

1. AXIOMS are neither *a priori* nor *a posteriori*, being held teleologically rather than intellectually.

2. Distinguish between a Theory of analytical thinking and an Analytical theory of thinking; and apply this distinction to the demarcation of the province of Logic.

3. The Inverse Logical Problem and its solution.

4. The choice of Symbolic Language.

5. The Method of Political Science.

6. "No real addition to our knowledge is ever made by reasoning." (Jevons.) Examine this in reference to procedure in the Physical Sciences.

SATURDAY, *May* 24, 1884. 9—12 A.M.

POLITICAL ECONOMY. ADVANCED.

[*In answering these questions candidates are at liberty to use diagrammatic or symbolical methods wherever they think them appropriate. Due credit will be given for any additional exactness of reasoning that may be thus attained.*]

1. SUPPOSE perfect freedom of trade between two countries, can the difference in the prices of commodities be greater than the double cost of carriage? Answer the question if you can in the technical language of the Foreign Exchanges. Would your answer be modified if one country were obliged to pay the other a heavy annual tribute?

2. Give exact definitions of the terms appreciation and depreciation as applied to gold and silver. What effect (if any) would an appreciation of gold produce in the relative values of Stock Exchange securities? Examine the empirical grounds for concluding that an appreciation of gold is probable in the proximate future.

3. Distinguish between Final and Total utility. If Final utility varies with every individual can it be of service as a scientific conception or in legislation? Illustrate your answer by reference to the way in which an economic man on an island might divide a store of corn into (*a*) food for himself, (*b*) food for his dog, (*c*) seed; also by reference to the utilitarian argument for popular rights of access to waste lands.

4. Can you reconcile Adam Smith's views on the relative advantages of different methods of employing capital with his support of the system of natural liberty in trade? If you think the reconciliation impossible, explain how you would modify either position, or which of the two you would abandon?

5. Explain the grounds on which profits are supposed to tend to a minimum. Compare the views of Adam Smith and Mill on this point. How is the tendency affected by the development of Trade Unions and Industrial Partnerships?

6. State the principal provisions of the Statute of Apprentices and express an opinion whether it was advantageous or the reverse to the labouring classes.

7. Compare the views of Malthus and Ricardo on Rent. Examine especially the following passage from Malthus;—"Is it (Rent) not an absolutely necessary part of that general surplus produce from the land, which has been justly stated to be the source of all power and enjoyment; and without which in fact there would be no cities, no military or naval force, no arts, no learning, none of the finer manufactures, and none of the conveniences and luxuries of foreign countries?"

8. Express in a precise form the Equation between Demand and Supply, defining the two terms. Illustrate by reference to the determination of Wages and Interest—so far as Wages and Interest are determined by Demand and Supply.

9. Examine the incidence of taxes on the following:—(*a*) deer-forests, (*b*) speculative Stock Exchange transactions, (*c*) interest from investments, (*d*) imported wool. In case (*d*) the tax should be assumed to be a heavy one.

SATURDAY, *May* 24, 1884. 9—12 A.M.

HISTORY OF ANCIENT PHILOSOPHY (ESSAYS).

[*Essays are to be written on either* **two** *or* **three** *of these subjects.*]

1. GIVE an account of Plato's Theory of Ideas, and of its origin and development, so far as this latter can be traced: and examine its relations to the metaphysical system of Aristotle.

2. "In his conception of the relation of soul and body, his theory of a central sense and his intuitions of a creative reason, [Aristotle] left behind him lessons which no psychologist can afford to disregard."

3. The connexion between Aristotle's conception of demonstrative science and his view as to the nature of things: illustrated by a comparison with the views of Descartes or Bacon.

4. The relation of Ethics to Metaphysics in the different schools of philosophy that sprang from Socrates.

5. The progress of philosophy in the post-Aristotelian age: with especial reference to the discussion of the Criterion of Truth.

SATURDAY, *May* 24, 1884. 1—4 P.M.

ADVANCED LOGIC AND METHODOLOGY.

1. "KANT rightly distinguishes between the analytical and the synthetical formation of judgments, but wrongly transfers the distinction to the judgments themselves." Comment on this.

2. Are 'species' and 'genus' determinants of notions merely, or of the existence and significance of real objects? Consider what modifications of the scholastic doctrine of the Predicables are forced upon us by the abandonment of Realism: and in particular, examine Mill's treatment of essentiality.

3. Find, by any method, the simplest expression for the contradictory of the expression "AB or AC": and shew by Boole's Method what can be predicated of what is not B when A is either B or C. Give a diagrammatic illustration of the latter answer.

4. State Boole's formula for the development of expressions; indicate how it can be obtained by ordinary logical processes. What is the reason of the appearance of the number 2 in the expression $x\bar{y}+\bar{x}y+2xy$ as the development of x and y?

5. Compare the functions and requisites of a hypothesis in practical life, in science, and in philosophical speculation.

6. What is meant by the Law of Error, and how far is it susceptible of proof? Indicate fully what you consider to be the relation of the Law of Error to the Method of Least Squares.

7. Is there any external standard by which belief may be measured? Discuss the question whether reasoning about Probabilities involves in every case a reference to a statistical series.

8. "Bacon was a logician in the widest and fullest sense of the term." What would Mansel, Whewell, and Mill, respectively, have said to this?

9. Examine the distinction that has been drawn between the knowledge of the Laws of Phenomena and the knowledge of their Causes. Are the causes which science investigates themselves phenomena, and if not, how are they related to phenomena?

SATURDAY, *May* 24, 1884. 1—4 P.M.

ADVANCED PSYCHOLOGY AND PSYCHOPHYSICS. (ESSAYS.)

[*Essays are to be written on either* two *or* three *of these subjects.*]

1. WHAT are the most general laws of the pleasurable combination of sense-impressions in forms of Space and Time? To what extent do these principles serve to explain what is commonly understood by beauty of form?

2. The relation of the psychology of communities (Völkerpsychologie) to that of the individual man, and the boundaries of Psychology and Sociology.

3. The psychological utility of studying the physiological concomitants of psychical states, and the limits of the "physiological explanation" of psychical phenomena.

4. The most important results already obtained, and likely to be obtained, from experimental inquiries into the duration of psychical processes.

5. The relation of Imagination and Thought.

6. The scientific value and meaning of the notions "temperament" and "character": and the method or methods of studying either.

SPECIAL EXAMINATION IN MODERN LANGUAGES FOR THE ORDINARY B.A. DEGREE.

FRIDAY, *May* 30, 1884. 9—12.

CHAUCER: PROLOGUE AND KNIGHTES TALE.

1. STATE Chaucer's practice with regard to the pronunciation of a final *e* (1) as occurring in adjectives, and (2) as occurring in verbs. Distinguish clearly between strong and weak verbs, and hence show the relationship between the pairs of verbs *fall* and *fell*, *sit* and *set*, *lie* and *lay*.

2. What are the principal dialects found in Early English manuscripts? How would you describe the dialect of Chaucer? Which dialect ultimately prevailed, and why?

3. Discuss the modern English forms *kine*, *brethren*. Give the plurals of *radius*, *species*, *axis*, *bandit*, *seraph*. Explain the forms *riches*, *eaves*, *alms*, *summons*; also *near*, *farther*, *rather*, *last*, *hindmost*.

4. Give the substance of the following lines in simple modern English, clearly explaining any difficult words, constructions, or references:

(*a*) To ferne halwes, kouthe in sondry londes.

(*b*) With lokkes crulle as they were leyd in presse.

(*c*) After the scole of Stratford atte Bowe.

(*d*) He yaf nat of that text a pulled hen.

What "text" is here referred to?

(*e*) Sownynge alway thencres of his wynnynge.

(*f*) He was a jangler and a goliardeys.

(*g*) Purs is the erchedeknes helle, quod he.

Give Chaucer's comment on this statement.

5. Describe "oure hoost." What was his proposal with respect to the tale-telling on the journey? Compare this proposal with Chaucer's actual performance. Whence did Chaucer derive materials for the Knightes Tale?

6. Give the substance of the following lines in modern English, explaining difficult words and constructions:

(*a*) The pilours diden businesse and cure.

(*b*) We faren as he that dronke is as a mous.

Give Chaucer's comment on this remark.

(*c*) The schepne brennyng with the blake smoke.

(*d*) Men may the olde at-renne, but nat out-rede.

(*e*) My lokyng is the fader of pestilence.

(*f*) And Jupiter so wis my soule gye.

7. Explain the following words:—gipser, rouncy, courtepy, envyned, lodemenage, chaunterie, maunciple, culpons, latoun, pilwebeer, herbergh, champartye, breeme, schode, chirkyng, outhees, hoppesteres, Dane.

8. Give the etymologies of the following modern English words:—abridge, apparel, caitiff, could, diaper, dozen, dress, fiend, garner, hauberk, lodestar, marshal, palace, quaint, rescue, sheriff, sudden, worship.

BURKE: PRESENT DISCONTENT; TWO SPEECHES ON AMERICA.

9. Give the dates of Burke's birth and death, of his Thoughts on the Present Discontents, and of his Two Speeches on America. Name some other of his works. How would you describe his political opinions? Mention some of the merits for which his works are remarkable.

10. What principal causes for "the present discontents" does Burke assign? What does he mean by "the Cabal," the "King's Men," the "Rota," and "the Double Cabinet"? How does he speak of Lord Bute?

11. Explain the phrase: "*Mettre le Roy hors de page.*" What were "the conquest of Corsica," and "the ransom of Manilla"? Give a sketch of Burke's remarks upon "the Civil List," and of his views regarding "the virtue, spirit, and essence of an House of Commons." For what reason does he "conclude that Mr Wilkes is an object of persecution"?

12. In what terms does Burke speak of Lord Chatham's Administration? What were the consequences of the Repeal of the Stamp Act? What, according to Burke, induced Townshend to propose a duty on tea?

13. Mention some of the causes of "the fierce spirit of Liberty" in the American people. What are meant by "the republic of Plato," "the Utopia of More," and "the Oceana of Harrington"? How did Burke propose to deal with America?

FRIDAY, *May* 30, 1884. 1—4.

SHAKESPEARE: JULIUS CÆSAR.

1. WHEN was Julius Cæsar probably written? From what source did Shakespeare principally draw the materials for his "Roman" plays? Name these plays.

2. Paraphrase and explain the following extracts, stating at the same time to what they refer:

(*a*) The abuse of greatness is, when it disjoins
Remorse from power; and, to speak truth of Cæsar,
I have not known when his affections sway'd
More than his reason.

(*b*) Between the acting of a dreadful thing
And the first motion, all the interim is
Like a phantasma, or a hideous dream:
The genius and the mortal instruments
Are then in council; and the state of man,
Like to a little kingdom, suffers then
The nature of an insurrection.

(*c*) Unicorns may be betrayed with trees,
And bears with glasses, elephants with holes.

(*d*) These couchings and these lowly courtesies
Might fire the blood of ordinary men,
And turn pre-ordinance and first decree
Into the law of children.

(*e*) I know not how,
But I do find it cowardly and vile
For fear of what might fall, so to prevent
The time of life.

3. Explain the following phrases, and the allusions in them: We shall find of him A shrewd contriver—Let us be sacrificers, but not butchers, Caius—the falling sickness—I know that we shall have him well to friend—Cry 'Havoc,' and let slip the dogs of war—One that feeds On abjects, orts, and imitations—He only, in a general honest thought And common good to all, made one of them.

4. Explain the grammatical peculiarities in the following phrases:

(*a*) I have much mistook your passion.

(*b*) The posture of your blows are yet unknown.

(*c*) My life is run his compass.

5. Explain the following words, as used by Shakespeare:—ceremonies, Lupercal, indifferently, swounded, thunder-stone, insuppressive, wafture, charactery, lethe.

Give the etymology of the words *rheum, hurtle, strange, coward, traitor.*

ENGLISH LITERATURE AND COMPOSITION.

6. Give some account of Tottel's Miscellany, Ralph Roister Doister, and The Mirror for Magistrates.

7. Give some account of the writings of Roger Ascham, George Gascoigne, and John Lyly. Discuss the general aim of the Shepheardes Calendar, and the influence of its author upon the poetry of his time.

8. Enumerate the principal dramatists of the reigns of Elizabeth and James I. Who were the authors of Tamburlaine, George a Greene, the First Part of Henry VI., The Blind Beggar of Alexandria, the Spanish Tragedy, Cynthia's Revels, The Faithful Shepherdess, The Knight of the Burning Pestle, The Duke of Milan, and The Duchess of Malfi?

9. Give some account of the writings of Francis Bacon.

10. Discuss the character of Antony as exhibited in Shakespeare.

11. Give a brief but clear sketch of the plot of one of Shakespeare's comedies.

12. Write a short essay on the following sentence from Bacon: "Revenge is a kinde of wilde Justice; which the more Mans Nature runs to, the more ought Law to weed it out."

SATURDAY, *May* 31, 1884. 9—12.

1. TRANSLATE into ENGLISH:

(*a*) Les représentants, prisonniers dans la caserne, pouvaient s'y mouvoir assez librement. Vers dix heures du soir, vacarme dans la cour. Les portes et les grilles tournaient à grand bruit sur leurs gonds. Quelque chose entrait qui roulait comme un tonnerre. On se pencha aux fenêtres et l'on aperçut arrêté au bas de l'escalier une espèce de gros coffre oblong, peint en noir, en jaune, en rouge et en vert, porté sur quatre roues, attelé de chevaux de poste, et entouré d'hommes à longues redingotes et à figures farouches, tenant des torches. Dans l'ombre, et l'imagination aidant, ce chariot paraissait tout noir. On y voyait une porte, mais pas d'autre ouverture. Cela ressemblait à un grand cercueil.—Qu'est-ce que c'est que ça? C'est un corbillard?—Non, c'est une voiture cellulaire.—Et ces gens-là, ce sont des croquemorts?—Non, ce sont des guichetiers.—Et pour qui ça vient-il?—Pour vous, messieurs! cria une voix. C'était la voix d'un officier; et ce qui venait d'entrer, c'était en effet une voiture cellulaire. En même temps on entendit crier:—Le premier escadron à cheval.—Et cinq minutes après, les lanciers qui devaient accompagner les voitures se rangèrent en ordre de bataille dans la cour. Alors il y eut dans la caserne une rumeur de ruche en colère. Les représentants montaient et descendaient les escaliers, et allaient voir de près la voiture cellulaire. Quelques-uns la touchaient, et n'en croyaient pas leurs yeux.

VICTOR HUGO. *Histoire d'un Crime. Book* I. *Chap.* 14.

(*b*)

Vive Paris, le roi du monde!
Je le revois avec amour.
Fier géant, armé de sa fronde,
Il marche, il grandit chaque jour.
Sur cette rive enchanteresse,
Grain tombé de l'humain semis,
Je viens retrouver ma jeunesse,
Retrouver tous mes vieux amis.

Ce grand Paris, plus d'un l'accuse
De rire même de ses maux.
Il rompt plus de jougs qu'il n'en use,
Tient moins au bon sens qu'aux bons mots.
L'en reprendre est affaire au sage.
Bénissons Dieu d'avoir permis
Qu'au milieu d'un peuple volage
On retrouve ses vieux amis.

Mes vieux amis, oui, je les trouve
Réunis tous pour me fêter.
C'est le bonheur que j'en éprouve,
Paris, qui me fait te chanter.
Dans l'absence le cœur sommeille;
Les souvenirs sont endormis.
Ce jour à jamais les réveille
J'ai retrouvé mes vieux amis.

BERANGER.

2. Translate into FRENCH:

I am now settled with a widow woman, who has a great many children, and complies with my humour in every thing. I do not remember that we have exchanged a word together these five years; my coffee comes into my chamber every morning without asking for it; if I want fire I point to my chimney, if water to my bason; upon which my landlady nods, as much as to say she takes my meaning, and immediately obeys my signals. She has likewise modelled her family so well, that when her little boy offers to pull me by the coat, or prattle in my face, his eldest sister immediately calls him off, and bids him not disturb the gentleman. At my first entering into the family, I was troubled with the civility of their rising up to me every time I came into the room; but my landlady observing, that upon these occasions I always cried Pish, and went out again, has forbidden any such ceremony to be used in the house; so that at present I walk into the kitchen or parlour, without being taken notice of, or giving any interruption to the business or discourse of the family. The maid will ask her mistress (though I am by) whether the gentleman is ready to go to dinner, as the mistress (who is indeed an excellent housewife) scolds at the servants as heartily before my face as behind my back. In short, I move up and down the house, and enter into all companies with the same liberty as a cat, or any other domestic animal, and am as little suspected of telling any thing that I hear or see.

THE SPECTATOR, No. 12.

3. How many kinds of French verbs have been recognised? Give examples of each.

4. Give the first person singular of the imperfect indicative, perfect indicative, future indicative, conditional, present subjunctive, and the present and past participle, of the following verbs:—envoyer, bouillir, acquérir, déchoir, absoudre, boire, connaître.

5. In subordinate clauses, when would you use *que* with the subjunctive, and when with the indicative? Construct sentences to explain your meaning.

6. State the rule for the formation of the plural of compound nouns and compound adjectives; and give the plural of entre-côte, coupe-gorge, grandpère, après-midi.

7. How is *any* expressed in French? Translate the following sentences: Any one else would have said yes; No plague does not spare anybody; There is nothing so agreeable as success; Experience gives better advice than any book.

SATURDAY, *May* 31, 1884. 1—4.

MOLIÈRE: LE MISANTHROPE. VOLTAIRE: LE SIÈCLE DE LOUIS XIV. CHAP. 1—13.

1. TRANSLATE the following passages:

(*a*) ARSINOÉ. Certes, vous vous targuez d'un bien foible avantage,
Et vous faites sonner terriblement votre âge.
Ce que de plus que vous on en pourroit avoir
N'est pas un si grand cas pour s'en tant prévaloir;
Et je ne sais pourquoi votre ame ainsi s'emporte,
Madame, à me pousser de cette étrange sorte.

CÉLIMÈNE. Et moi, je ne sais pas, madame, aussi pourquoi
On vous voit en tous lieux vous déchaîner sur moi.
Faut-il de vos chagrins sans cesse à moi vous prendre?
Et puis-je mais des soins qu'on ne va pas vous rendre?
Si ma personne aux gens inspire de l'amour,
Et si l'on continue à m'offrir chaque jour
Des vœux que votre cœur peut souhaiter qu'on m'ôte,
Je n'y saurois que faire, et ce n'est pas ma faute;
Vous avez le champ libre, et je n'empêche pas
Que pour les attirer vous n'ayez des appas.

(*b*) Je sais prendre parti sur cette préférence,
Et ce n'est pas mon cœur maintenant qui balance:
Il n'est point suspendu sans doute entre vous deux,
Et rien n'est sitôt fait que le choix de nos vœux;
Mais je souffre, à vrai dire, une gêne trop forte
A prononcer en face un aveu de la sorte:
Je trouve que ces mots qui sont désobligeants,
Ne se doivent point dire en présence des gens.
Qu'un cœur de son penchant donne assez de lumière,
Sans qu'on nous fasse aller jusqu'à rompre en visière;
Et qu'il suffit enfin que de plus doux témoins
Instruisent un amant du malheur de ses soins.

(*c*) A neuf heures du matin les deux compagnies de mousquetaires, une centaine de grenadiers, un bataillon des gardes, un du régiment de Picardie, montent de tous côtés sur ce grand ouvrage à couronne. L'ordre était simplement de s'y loger, et c'était beaucoup: mais quelques mousquetaires noirs, ayant pénétré par un petit sentier jusqu'au retranchement intérieur qui était dans cette fortification, ils s'en rendent d'abord les maîtres. Dans le même temps, les mousquetaires gris y abordent par un autre endroit. Les bataillons des gardes les suivent: on tue et on poursuit les assiégés: les mousquetaires baissent le pont-levis qui joint cet ouvrage aux autres: ils suivent l'ennemi de retranchement en retranchement, sur le petit bras de l'Escaut et sur le grand. Les gardes s'avancent en foule. Les mousquetaires sont déjà dans la ville, avant que le roi sache que le premier ouvrage attaqué est emporté.

2. Translate the following lines, explaining carefully the construction or the allusion contained in the words printed in italics:

(*a*) Et parfois, *n'en déplaise à* votre austère honneur,
Il est bon de cacher ce qu'on a dans le cœur.

(*b*) Je voudrois, *m'en coûtât-t'-il grand'chose,*
Pour la beauté du fait, avoir perdu ma cause.

(*c*) Et n'allez pas quitter, *de quoi que l'on vous somme.*

(*d*) Je *me passerai fort que* vous les approuviez.

(*e*) Et je crois, par le rang que me donne ma race,
Qu'il est fort peu d'emplois dont je ne *sois en passe.*

(*f*) *Pour peu que* d'y songer vous nous fassiez des mines,
On peut, pour vous servir, remuer des machines.

(*g*) Il fit *repasser* le Rhin *aux Allemands.*

(*h*) Il *n'entreprit point sur* les priviléges dont le peuple était jaloux.

(*i*) Un père qui aurait marié son fils sans lui donner l'administration de son bien, *n'en eût pas usé* autrement que Mazarin.

(*k*) Alors les ambassadeurs de France *prétendaient la main* sur les électeurs. Celui de Brandebourg offrit *tous les tempéraments* pour traiter à Clèves.

(*l*) Ses ennemis *eurent beau faire* des propositions outrées pour colorer leur faiblesse.

3. When was *Le Misanthrope* first acted? What do you conceive to have been Molière's object in writing it; and what persons have been suggested as the originals of what characters?

4. When did Corneille live? Give a short analysis of any one of his plays, and state the innovations introduced by him into dramatic literature.

5. What form did historical writing take in the seventeenth century? Name any principal writer of history during that period.

6. What works of fiction were popular during the reign of Louis XIV.? Give a short account of the plot of any one of them.

SATURDAY, *May* 31, 1884. 9 to 12.

GERMAN COMPOSITION, TRANSLATION AND LITERATURE.

I. TRANSLATE into GERMAN:

Ever since your Spectator of Tuesday last came into our family, my husband is pleased to call me his Oceana because the foolish old poet that you have translated says that the souls of women are made of sea-water. This it seems has encouraged my sauce-box to be witty upon me. When I am angry he cries 'Pr'ythee, my dear, be calm;' when I chide one of the servants, 'Pr'ythee, child, do not bluster.' He had the impudence about an hour ago to tell me that he was a sea-faring man, and must expect to divide his life between storm and sunshine. When I bestir myself with any spirit in my family, it is 'high sea' in his house; and when I sit still without doing anything, his affairs forsooth are 'windbound.' When I ask him whether it rains, he makes answer, 'It is no matter, so that it be fair weather within doors.' In short, Sir, I cannot speak my mind freely to him but I either swell or rage or do something that is not fit for a civil woman to hear. Pray, Mr Spectator, since you are so sharp upon other women, let us know what materials your wife is made of, if you have one. I suppose you would make us a parcel of poor-spirited tame insipid creatures; but, Sir, I would have you to know, we have as good passions in us as yourself and that a woman was never designed to be a milk-sop.

Martha Tempest.
[SPECTATOR].

II. Translate into ENGLISH:

(*a*) Und nun eilte die Regentin, dem König eine Botschaft zu hinterbringen, mit der sie ihn während ihrer ganzen Verwaltung noch nicht hatte erfreuen können. Sie verkündigte ihm, dass es ihr gelungen sei, allen niederländischen Provinzen die Ruhe wieder zu schenken, und dass sie sich stark genug glaube, sie darin zu erhalten. Die Secten seien ausgerottet, und der römisch-katholische Gottesdienst prange in seinem vorigen Glanze; die Rebellen haben ihre verdienten Strafen empfangen, oder erwarten sie noch im Gefängniss; die Städte seien ihr durch hinlängliche Besatzung versichert. Jetzt also bedürfe es keiner spanischen Truppen mehr in den Niederlanden, und nichts sei mehr übrig, was ihren Eintritt rechtfertigen könnte. Ihre Ankunft würde die Ordnung und Ruhe wieder zerstören, welche zu gründen ihr so viel Kunst gekostet habe, dem Handel und den Gewerben die Erholung erschweren, deren beide so bedürftig seien, und, indem sie den Bürger in neue Unkosten stürze, ihn zugleich des einzigen Mittels zu Herbeischaffung derselben berauben.

SCHILLER, *Geschichte des Abfalls der Vereinigten Niederlande.*

(*b*) Ha! nicht sterben können! nicht sterben können!
Nicht ruhen können nach des Leibes Müh'n!
Den Staubleib tragen! mit seiner Todtenfarbe
Und seinem Siechthum! seinem Gräbergeruch!
Sehen müssen durch Jahrtausende
Das gähnende Ungeheuer Einerlei!
Und die geile, hungrige Zeit,
Immer Kinder gebärend, immer Kinder verschlingend.
Ha! nicht sterben können! nicht sterben können!
Schrecklicher Zürner im Himmel,
Hast du in deinem Rüsthause
Noch ein schrecklicheres Gericht?
Ha! so lass es niederdonnern auf mich!
Mich wälz' ein Wettersturm
Von Karmels Rücken hinunter,
Dass ich an seinen Fusse
Ausgestreckt lieg'—
Und keuch'—und zuck' und sterbe!

SCHUBART, *Der ewige Jude.*

III. Give some account of the life and writings of Klopstock, Wieland, and Richter. Criticize Schiller's historical writings.

SATURDAY, *May* 31, 1884. 1 to 4.

GUTZKOW: ZOPF UND SCHWERT.

1. TRANSLATE into English, adding *marginal* explanations:

(*a*) HOTHAM. Auf eine persönliche Neigung des Prinzen von Wales zu seiner Cousine, Prinzessin Wilhelmine, wird wenig ankommen. Lieben sie sich, lieben sie sich nicht, dem Parlament ist darüber nichts zu Protokoll gegeben. Der Prinz von Wales wird als künftiger König von England jede Verbindung eingehen, die ihm das Nationalinteresse als wünschenswerth andeuten wird. Eine solche ist nun unter den gegenwärtigen politischen Constellationen die mit der Dynastie des jugendlich aufstrebenden Königreichs Preussen.

ERBPRINZ. Und das enthielte eine Hoffnung für mich?

HOTHAM. Nicht liegt sie in diesem meinem unglücklichen Auftrage, wol aber in einer Clausel desselben—diese Ehe, und wär' ihr alles günstig, nur unter der Bedingung abzuschliessen, (*sich umsehend*) dass die bisher von Preussen ausgeschlossen gewesenen englischen Waaren aufs neue unter annehmbaren Bedingungen (*leise*) wieder eingelassen werden können.

ERBPRINZ. Und in dies kaufmännische Project mischt sich eine Frage der Liebe, eine Angelegenheit des Herzens?

HOTHAM. Ich vertrete die Herzen unserer Kaufleute, die heiss für den Thron, aber noch heisser für ihre Rimessen schlagen.

(*b*) KÖNIG. Geben Sie mir die Hand, Ritter! Kommen Sie heut' in unser Colleg Bei einem Trunk Bier spülen wir unsern diplomatischen Aerger hinunter und in den blauen Dampfwolken verpuffen wir alle unsere Ränke, Pfiffe und Kniffe.

EVERSMANN. Aber, Majestät, wer soll denn heute den Stoff zum Lachen abgeben?

HOTHAM. Nehmen Ew. Majestät heute mich zum Stichblatt!

KÖNIG. Oho! Herr Ritter, da geht's scharf her! Wer so von einem Dutzend alter Soldaten geprellt wird, der erholt sich in ein paar Wochen nicht wieder!

HOTHAM (*bei Seite*). Angenehmes Schicksal, da den Fuchs zu machen.

KÖNIG. Wir finden aber schon Einen, den wir heut' in die Mitte nehmen. Lachen sollen Sie, lachen und dann—dann erzählen Sie uns auch etwas von den Hahnenkämpfen und von den Boxern in England. Sehen Sie, solchen Spass, den hätt' ich für mein Leben gern und wollt' ihn auch gern hereinlassen in's Land, ohne Zoll, ohne alle Accise. Also um acht Uhr Tabagie! Pardon für die sonderbare Abschiedsaudienz. Bringen Sie einen guten Durst mit. Im Trinken—da halten wir uns dann auch nicht an die üblichen Formen!

2. Explain the phrases: *über den Löffel zu balbiren; er galt nicht Ihnen; fünf eine gerade Zahl sein lassen; so was Grosses!; wo der Pfeffer wächst; Einen gross ansehen; auf Einen bekennen; sich aus dem Staube machen; Einem über die Blase kommen; kein Blatt vor der Mund nehmen; er hat 'nen Spitz.*

3. Comment on the words:—*Abenteuer, Gedeck, Bannen, Schäferspiel, Polterabend, Duodezprinz, Losgeschossen.*

GOETHE: HERMANN UND DOROTHEA.

4. Translate into ENGLISH adding notes when necessary:

a. Hatten die Eltern die Braut für ihren Sohn sich ersehen,
Ward zuvörderst ein Freund vom Hause vertraulich gerufen;
Diesen sandte man dann als Freiersmann zu den Eltern
Der erkorenen Braut, der dann in stattlichem Putze
Sonntags etwa nach Tische den würdigen Bürger besuchte,
Freundliche Worte mit ihm im Allgemeinen zuvörderst
Wechselnd, und klug das Gespräch zu lenken und wenden verstehend.
Endlich nach langem Umschweif ward auch der Tochter erwähnet,
Rühmlich, und rühmlich des Manns und des Hauses, von dem man gesandt war.
Kluge Leute merkten die Absicht; der kluge Gesandte
Merkte den Willen gar bald und konnte sich weiter erklären.
Lehnte den Antrag man ab, so war auch ein Korb nicht verdriesslich.
Aber gelang es denn auch, so war der Freiersmann immer
In dem Hause der Erste bei jedem häuslichen Feste;
Denn es erinnerte sich durch's ganze Leben das Eh'paar,
Dass die geschickte Hand den ersten Knoten geschlungen.
Jetzt ist aber das Alles mit andern guten Gebräuchen
Aus der Mode gekommen, und Jeder freit für sich selber.
Nehme denn Jeglicher auch den Korb mit eigenen Händen,
Der ihm etwa bescheert ist, und stehe beschämt vor dem Mädchen!

β. Sicher, Du überlegtest nicht wohl, o Mädchen des Auslands,
Wenn Du bei Fremden zu dienen Dich allzu eilig entschlossest,
Was es heisse, das Haus des gebietenden Herrn zu betreten;
Denn der Handschlag bestimmt das ganze Schicksal des Jahres,
Und gar Vieles zu dulden verbindet ein einziges Jawort.
Sind doch nicht das Schwerste des Diensts die ermüdenden Wege,
Nicht der bittere Schweiss der ewig drängenden Arbeit;
Denn mit dem Knechte zugleich bemüht sich der thätige Freie;
Aber zu dulden die Laune des Herrn, wenn er ungerecht tadelt
Oder Dieses und Jenes begehrt, mit sich selber in Zwiespalt,
Und die Heftigkeit noch der Frauen, die leicht sich erzürnet,
Mit der Kinder roher und übermüthiger Unart:
Das ist schwer zu ertragen und doch die Pflicht zu erfüllen
Ungesäumt und rasch, und selbst nicht mürrisch zu stocken.

5. Discuss the following words and phrases:

Landauer; durch einander; unbesonnene Sorgfalt; Grillen; Römer; Baarschaft; alles ist so begegnet; einen vergeben; Klinke; Saumsal; Jeglichen lassen gewähren; er entfernte sich niemals | weit er sagt' es ihr denn; ich wäre besser zu widerstehen; Unbill; er verlobt sie Dir; gerne schick' ich mich an; die Herren des Tages; das Gesinde; Dach und Fach; traun.

6. (i) What is the distinction between separable and inseparable verbs? With which prepositions are verbs that are both separable and inseparable compounded?

(ii) Distinguish the uses of *allein aber* and *sondern*. When is *worden* used and when *geworden*?

(iii) State the uses of the subjunctive mood in German.

SPECIAL EXAMINATION IN NATURAL SCIENCES FOR THE ORDINARY B.A. DEGREE.

FRIDAY, *May* 30, 1884. 9—12.

BOTANY. I.

1. DESCRIBE the various shapes assumed by vegetable cells, giving examples of their occurrence. State what you know of the circumstances which determine the form in the different cases.

2. Give an account of the anatomy of laticiferous canals, the parts of plants in which they are found, and the nature of their contents.

3. With what characters of minute structure is the axial mode of growth usually associated? How far does your answer apply to the lower Cormophytes?

4. Describe the *prickles* of the Rose or Bramble, their minute structure, form, morphological nature, and function. Compare them with the *spines* of the Barberry and Hawthorn.

5. Describe the roots of a Grass or other Monocotyledon and compare them with those of a Dicotyledon.

In what essential characters does a root differ from (1) astem, (2) a leaf?

6. State briefly the ordinary characters of the epidermis of an aerial leaf, and give a more detailed account of the cuticle and its functions.

7. State the conditions under which a plant or a part of a plant evolves oxygen or carbon dioxide respectively. Under what circumstances may the latter process be easily observed?

FRIDAY, *May* 30, 1884. 9—12.

CHEMISTRY. I.

1. AVOIDING any mere formal definition, explain what you consider Heat to be, and describe a series of experiments in support of the explanation which you give.

2. "Temperature is a quality, heat is a quantity." Justify this statement and explain the physical principles on which the measurement of both temperature and heat is based.

(i) What relative weights of iron and copper will contain the *same* quantity of heat, the temperature of the two being the same?

(ii) At what relative temperatures respectively will *equal* weights of iron and copper contain the same quantity of heat?

Sp. heat of Iron = ·11380, sp. heat of Copper = ·09515.

3. What is meant by the expressions 'expansion,' 'coefficient of expansion,' 'apparent expansion,' and 'absolute expansion'?

How may the coefficient of the absolute expansion of mercury be determined? How is it that the method you describe gives the desired results? Give examples to show the importance of this determination.

4. When is a liquid said to boil? How do you define boiling point? By what experiments could you prove the truth of your definition?

5. Describe and distinguish carefully between the methods by which heat may be transmitted from one point to another.

Suppose two bars of different metals were given to you how would you determine which is the best conductor? How could the absolute thermal conductivity of one of the bars be accurately determined?

6. What is the mechanical equivalent of heat? How has it been determined?

Explain how it is that a knowledge of the mechanical equivalent of heat enables us to determine the specific heat of a gas at constant volume when the specific heat of the gas at constant pressure is known.

7. Calculate the density of alcohol vapour from the following data obtained by Dumas' method:—

Weight of flask at 18° C. = 50·8 grams.

Weight of the flask filled with alcohol vapour = 50·8245 grams.

Temperature of flask when sealed = 167° C.

Capacity of flask = 351·5 c.c.

1 litre of H. at 0° C. and 760 m.m. of Mercury weighs ·08936 grams.

FRIDAY, *May* 30, 1884. 9—12.

GEOLOGY. I.

1. GIVE an account of the action of frost as an agent in the destruction of rocks.

2. Explain how the depth of the focus of an earthquake may be estimated, drawing a diagram to illustrate your answer.

3. Name the geological formations in which volcanic rocks occur in Great Britain, and state how you would determine whether a given sheet of igneous rock was *intrusive* or *interbedded*.

4. What arrangement of strata is necessary for the production of surface springs? Name the deposits which give rise to springs at Cambridge.

5. By what characters would you distinguish a fluviatile from a marine deposit, and a shallow water from a deep water deposit?

6. Give proofs that great denudation has occurred in past times.

7. Draw a vertical section showing the strata that would be passed through in a boring 500 ft. deep made from the top of the Gogmagog Hills above the Cherry Hinton quarries.

FRIDAY, *May* 30, 1884. 9—12.

ZOOLOGY. I.

1. GIVE a brief account of the structure of Hydra, and point out the most important differences between it and Actinia.

2. Give a short account of the heart and main vascular trunks, both venous and arterial, of the Frog, and compare the arrangement you describe with that found in a Fish and that in a Mammal.

3. What is the typical structure of a secretory organ? Describe the chief forms of secretory organs met with in the animal kingdom, and point out how the typical structure is provided for in each case.

4. Describe fully the structure of the egg of a Bird, pointing out the significance of its several parts. Trace briefly the formation of the blastoderm in such an egg.

5. Enumerate the characteristics which distinguish the Mammalia from other classes of Vertebrata.

6. Give some account of the blood of an Invertebrate and of a Vertebrate, and of the functions of the elements, structural and other, of which it is composed.

FRIDAY, *May* 30, 1884. 1—4.

BOTANY. II.

1. DESCRIBE in technical language the specimens A, B, C, D, and refer them to their natural orders, giving reasons for such reference. Give the characters of these orders.

2. Draw floral diagrams to illustrate the specimens E, F, distinguishing parts which are abortive or suppressed from those fully developed.

3. Describe the microscopic specimens *a*, *b*, *c*, and make a drawing of *one* of them. What structural features do you consider these specimens are intended to illustrate?

FRIDAY, *May* 30, 1884. 1—4.

CHEMISTRY. II.

1. STATE and illustrate the laws of chemical combination, and describe any theory of the ultimate constitution of matter which has been assumed to account for these laws.

2. A molecule of hydrogen is regarded as consisting of two atoms. By what process of experiment and reasoning has this conclusion been arrived at?

3. Give an account of the composition of the atmosphere. How may the relative amount of its various constituents be determined?

4. State three ways of obtaining carbon monoxide, with equations. How may its composition be determined?

5. How may marsh gas and oléfiant gas be prepared?

A litre of each of these gases is mixed with four litres of oxygen and exploded. Express the reactions by equations, and state the volumes of the resulting gases in each case.

6. Describe the chemical changes which take place in the preparation of phosphorus from bone-earth, and of ordinary phosphoric acid from phosphorus.

7. Give equations representing the action of sulphuretted hydrogen on (1) water containing air in solution, (2) nitric acid, (3) sulphur dioxide, (4) a solution of ferric chloride, (5) a solution of potassium dichromate.

8. Give the chief properties of the metal magnesium.

How may it be prepared from magnesium sulphate?

9. Describe the chlorides of mercury, and a method of preparing them.

FRIDAY, *May* 30, 1884. 1—4.

GEOLOGY. II.

1. DESCRIBE the action of a glacier as a geological agent; and give an account of the deposits in Great Britain which are referred to ice action, mentioning the districts where they occur.

2. The river Medway instead of flowing along the low Weald plain out to the sea on the east turns sharply to the north and passes through a valley in the Lower Greensand and Chalk escarpments. What explanation can you give of the peculiar course which it takes?

3. Describe the formation of the various kinds of caves. What are *swallow-holes?* How are they formed?

4. From what beds in the geological series has fossil fuel been obtained? Name the chief localities where it is worked in Great Britain.

5. Define "slaty cleavage" and give the reasons for believing that it has been produced by lateral pressure exerted upon the rocks.

6. In the Artesian boring at Kentish Town the Gault was found to rest on Devonian rocks. Name the strata which elsewhere occur between the Devonian and Gault. How do you account for their absence in the London area?

7. Describe and name not more than four of the specimens 1—6.

FRIDAY, *May* 30, 1884. 1—4.

ZOOLOGY. II.

1. COMPARE Anodon with Lumbricus with regard to the general form of the body, the nervous system, and the vascular system.

2. Give a brief account of the developement of the brain and cranial nerves of the chick. Point out the bearing of the facts you mention on any view as to the origin of the nervous system.

3. What is the essential part of the process of respiration? How is this provided for in Hydra, Anodon, Blatta and Rana?

4. Describe with diagrams the anatomy of Ascidia.

What views do you hold as to the systematic position of the Tunicata?

5. Describe the structure typical of the Echinodermata, and illustrate your answer by a special reference to the anatomy of Asterias.

6. Draw and describe the specimens *A*, *B*, *C*.

SATURDAY, *May* 31, 1884. 9—12.

BOTANY. III.

1. GIVE an account of the structure and developement of pollen, and of the process of fertilisation in any common flowering plant.

What structures in the higher Cryptogams correspond to pollen grains?

2. What is meant by 'alternation of generations'? Mention some groups of plants in which it occurs, and note any important difference between the cases.

3. Give an account of the structure known as 'albumen' which occurs in many seeds. From what structures of the ovule is it developed? How is the germination of exalbuminous seeds provided for?

4. Describe the sporangia and spores of a Fern and those of a Lycopod (e.g. Selaginella). Compare and contrast spores with seeds.

5. Give the characters of any *three* of the following Natural Orders, and compare each of the three with two others nearly allied to it, illustrating your description by floral diagrams: Cruciferæ, Geraniaceæ, Orchidaceæ, Scrophulariaceæ.

6. Describe fully the Natural Order Umbelliferæ, paying special attention to the characters of the fruit. Give the names and characters of its sub-orders.

7. Give briefly the life history of a Moss.

SATURDAY, *May* 31, 1884. 9½—12½.

PRACTICAL CHEMISTRY.

[*The answers must include an account of all the observations made, and the conclusions drawn from them.*

The chemical changes involved in the processes adopted should be briefly indicated, in the form of equations or otherwise.]

1. FIND the basic constituent of A.

2. B is a simple salt; find its component parts.

3. Examine C without bringing it into solution.

4. Make a qualitative analysis of D.

SATURDAY, *May* 31, 1884. 9—12.

GEOLOGY. III.

1. DESCRIBE the deposits which are now being formed in the deep sea, stating approximately at what depths the several kinds occur.

2. Define the term "rock" in its geological sense and state how you would distinguish (in a hand-specimen and in the field) between an aqueous, an igneous and a metamorphic rock, mentioning an example of each.

3. A shaft was sunk through coal measures and a seam of coal reached at a depth of 200 ft. On carrying the shaft 50 ft. lower the same seam was again met with. Explain this circumstance, drawing a diagram to illustrate your answer.

4. Give the succession of the Tertiary deposits in the London and in the Hampshire basins respectively. Point out some of the most striking differences between the fauna of the Secondary and Tertiary periods.

5. Give a short account of the Trias, mentioning the substances of economic value which are obtained from it in Great Britain.

6. Give the range in time of the following genera stating in what formations they are most abundant:—*Ananchytes, Calymene, Cyathophyllum, Gomatites, Icthyosaurus, Orthoceras, Producta, Palæotherium, Pterichthys, Terebratula, Trigonia, Voluta.*

7. Name four of the specimens 1—6, giving the characters by which you identify each.

SATURDAY, *May* 31, 1884. 9—12.

ZOOLOGY. III.

1. DESCRIBE and compare the auditory apparatus, (labyrinth and accessory structures) of a Frog, a Fish and a Mammal.

2. Describe briefly and define an Arthropod, an Annelid and a Mollusc.

3. Describe and compare the exoskeletal structures met with in Homarus, Anodon, Testudo, Columba and Mus.

4. Mention the parts which enter into the composition of a typical pectoral and pelvic girdle. Describe the pectoral girdle of Testudo, Columba and Mus.

5. Point out and describe briefly what you consider to be the fundamental vital phenomena exhibited by such an organism as an Amœba.

How far are the same phenomena met with in plants?

6. Name the specimens I, II, III, giving your reasons in each case.

SPECIAL EXAMINATION IN MECHANISM AND APPLIED SCIENCE FOR THE ORDINARY B.A. DEGREE.

FRIDAY, *May* 30, 1884. 9 to 12.

MECHANICS.

1. BRICKWORK weighs 112 lbs. per cubic foot and it will stand a pressure of 800 lbs. per square inch before it crushes. How high could you build a brick wall before the bottom bricks were crushed?

2. Describe the ordinary smith's bellows.

How would you measure the pressure of air from a fan or bellows whilst it was in action?

3. Hat pegs are usually screwed to the door with three screws, forming a triangle with the apex downwards; why is this stronger than if the apex was upwards?

4. How is a true plane surface made? Why does it stand on three feet?

5. A piece of iron is put between the centres of a lathe and the slide rest is set to turn it cylindrical. If you find that after it has been turned the middle is of a larger diameter than their ends, how should you remedy this and account for it? If again one end is larger than the other how should you remedy and account for this?

6. Cast iron water-pipes are sometimes cast in a vertical position and sometimes in a horizontal position; which is best? and why should you expect to find the metal more uniform in thickness when cast vertically? Why are heavy weights placed on the top box in casting?

7. If an ordinary lift pump is placed at a considerable distance in a horizontal direction from the well, should you put an air vessel on the suction pipe? Explain your reasons.

8. A man can do 4200 ft. lbs. per minute, how many gallons of water can he pump up 90 ft. in one hour? Assume that the pump is a perfect machine and that a gallon of water weighs 10 lbs.

But he finds that he pumps 140 galls. in the hour, what is the efficiency of the pump?

In what respects is the efficiency of the pump not perfect?

9. If 8 men row a boat 6 miles an hour, how quick could they make the boat go if each man did twice the quantity of work in a given time? Assume that the resistance of the boat varies as the square of its velocity.

10. A waggon runs down an inclined plane with a slope of 1 in 60. How quick will it be moving after it has gone 240 ft.? Neglect the inertia of the wheels and the friction of the axles.

Explain how to take into account the inertia of the wheels.

11. A reservoir is situated 200 ft. above the town which it supplies with water. From the reservoir the pipe first crosses a valley one mile broad; at this point the pipe is 150 ft. above the town; it then crosses another valley also one mile broad to the town. Should the whole of this pipe be of one size? If not, what principles should govern the sizes of the pipes?

12. A copper tube 1 in. in diameter and ·01 inch thick bursts with a pressure of 672 lbs. on the square inch. What is the tensile strength of the copper in tons per square inch?

A vessel is required to hold a certain quantity of air at a given pressure, and it is made out of a tube. If the material used in stopping up the ends of the tube be not taken into account, shew that the quantity of material required will be the same whatever size of tube is used.

13. Find the pull on the draw bar of a locomotive for each lb. per square inch pressure of steam, assuming that there is no loss by friction and that the full pressure of steam acts throughout the stroke, and that the wheels do not slip.

Take the following dimensions:

Cylinders 16 in. diameter.
Stroke 24 in.
Driving wheels 5 ft. in diameter.

FRIDAY, *May* 30, 1884. 1 to 4.

HEAT.

1. GIVE some of the arguments which lead to the now generally accepted conclusion that Heat is not a peculiar substance, but a Mode of Motion.

Describe one of the methods by which the mechanical equivalent of heat was determined by Joule, and state its value.

2. Shew how to construct a mercurial thermometer.

State what graduations are usually employed; and explain how to convert from one system of graduations to another.

3. Shew how to determine accurately the linear expansion of a metal.

Explain how to compensate for the expansion due to change of temperature in the rods used to work railway points at a distance from a signal box.

4. Distinguish between the absolute expansion of mercury and its apparent expansion in glass.

Describe the experiment by which the former has been determined.

5. Explain the meaning of specific heat.

If 4 lbs. of iron in fragments at a temperature of 212° F. are thrown into 10 lbs. of water at 60° F. and moved about to equalize the temperature, which is found to become 66°·6 F., find the specific heat of iron.

6. Describe the phenomena of latent heat.

What weight of steam at 212° F. would be required to convert 1 lb. of pounded ice at 32° into water at 32°?

7. Explain how the equation connecting the pressure, volume and temperature of a given quantity of gas was obtained from experimental data.

Define absolute temperature, and the absolute zero.

If a quantity of atmospheric air were compressed into one-tenth of its volume, and the temperature raised from 60° to 1000° F., determine the new pressure in lbs. on the square inch.

8. What is the cause of draught in a chimney?

With a view of getting a longer column of heated air, and thereby attempting to increase the draught, chimneys have sometimes been constructed with the flue running obliquely upwards. Is this principle sound?

How is the draught produced in a locomotive and in a torpedo boat?

9. Describe with diagrams the ordinary marine boiler and a locomotive boiler.

Account for the greater efficiency of the locomotive boiler when running on a railway than when employed for stationary purposes.

10. Describe with diagrams the ordinary marine compound engine for screw steamers.

What are the causes of the superior economy of the compound engine, and state the consumption of fuel now allowed for in the best modern types.

11. Describe Siemen's regenerator gas furnace.

Explain how the same principle may be applied to gas lamps.

12. Describe Davy's safety lamp. How does it behave in a mixture of air and fire-damp?

13. Describe the Otto gas engine.

SATURDAY, *May* 31, 1884. 9 to 12.

MAGNETISM AND ELECTRICITY.

1. STATE the laws of magnetic attraction and repulsion.

How does a compass behave when brought near an iron column, and why?

2. Explain how the compass is corrected in an iron ship.

Describe Thomson's marine compass.

3. A magnetic needle makes 12 oscillations a minute under the influence of the earth's magnetism alone. Under the combined influence of the earth and a magnet *A* it makes 14 oscillations, and 16 oscillations when the magnet *A* is replaced by another magnet *B*. Compare the magnetic strength of the two magnets *A* and *B*.

4. Describe the frictional electrical machine.

Describe a machine for firing mines by electricity, and describe the fuze employed.

5. Explain the action of the Leyden jar.

Describe the condenser used with a marine cable.

6. Describe Coulomb's experiment for determining the laws of electrical attraction and repulsion.

Explain the action of the siphon recorder.

7. If a conducting sphere be hung up and an electrified point be brought near it, describe the distribution of electricity on the sphere (i) when uninsulated, (ii) when insulated.

8. State Ohm's law, and define the volt, ampère, and ohm.

How many inches of mercury a square inch in section has a resistance of one ohm?

9. Describe Leclanché's battery.

Explain how a secondary battery may be used to store electricity, and describe an electric launch driven by secondary batteries.

10. Explain the dynamo as used to generate an electric current.

Describe the armature in the Edison dynamo, and the Gramme ring.

11. What happens if a current is driven through a dynamo?

Explain Fleeming Jenkin's system of Telpherage.

12. Design the whole arrangement required for an installation of 100 Swan lamps.

13. Describe the Morse transmitter and receiver.

SATURDAY, 31 *May*, 1884. 9 to 12.

MECHANISM.

1. EXPLAIN with drawings how the wheel work of the minute hand and hour hand of a clock are arranged.

If it was required that the hour hand should turn in the opposite direction to the minute hand how would you do it?

2. Explain the arrangement of reversing a machine by means of two straps, one "open" and one "crossed"?

How can a quick return be arranged by this plan?

3. In traction engines and in some tricycles there is an arrangement by which both the large wheels are always driven with equal force; explain how this is done.

4. The centres of two spur wheels are 3 ft. apart, and the wheels have 24 and 11 teeth. What is the radius of the pitch circle in each case?

5. Why is it better to have the number of teeth in two wheels which gear together prime to each other?

6. An eccentric and a crank give precisely the same movement, why then are cranks sometimes used and eccentrics at other times? Give the advantages of both.

7. Explain how to construct a cam to give a particular movement, such as to draw a given curve on a uniformly moving piece of paper.

8. Explain Watt's sun and planet motion.

What would be the effect of making the planet wheel twice the size of the sun wheel?

9. A ratchet and ratchet wheel were carelessly designed and it was found that the ratchet would not keep in its place, but jumped out when the pressure came on the ratchet. What is the fault in the design?

10. Explain the action of the counting machine which consists of a screw and two worm wheels with 100 and 101 teeth.

11. Explain with drawings the action of the slide valve of an engine.

When an expansion valve is placed at the back, how is it arranged?

12. Explain the mechanism of a lock in which there are several tumblers.

MONDAY, 2 *June*, 1884. 9 to 1 AND 2 to 5.

PRACTICAL WORK.

1. Is the given trying plane in winding?

Sharpen the trying plane iron on an oil stone.

Set it to cut a very thin shaving of hard wood.

2. Grind and sharpen on an oil stone the given chisel and gouge.

3. Saw out a piece of wood, chuck it, and turn it to pattern.

4. Cut out, plane up two pieces of wood, and fix hinges to them like the given pattern.

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5. Cut off one inch of the wrought iron rod with cross cut chisel.

6. Make a drill out of the given steel wire to drill a hole the same size as the given drill. Drill a hole in the given brass plate with it in the lathe.

7. Tap a $\frac{5}{8}$ inch nut with Whitworth tap. Turn up the given wrought iron rod and make half its length fit a $\frac{5}{8}$ Whitworth gauge, and cut a screw on the other half in the lathe to fit the nut. Reduce one end to take the carrier.

8. File the four sides of the given pieces with each other.

9. Prepare a mould to cast from the given pattern.

FIRST EXAMINATION FOR M.B. DEGREE.

FRIDAY, *June* 6, 1884. 9—12.

[*Those Candidates who are taking Animal Biology only will confine their answers to questions* 5—9. *They are requested to write "Animal Biology only" on their answers before giving them up.*]

ELEMENTARY BIOLOGY.

1. POINT out what is the essential difference between the nutritive processes of Protococcus and of Yeast, as indicated by the chemical nature of their respective food-materials.

2. Give a general account of the anatomy and morphology of Chara, describing in detail the mode of growth in length of the stem, and the development of the cortex.

3. Briefly define and describe, giving examples, a zygospore, an antheridium, an antherozoid, an oosphore, a sporangium, a zoospore.

4. Write the life-history of a Fern. What organs in a Flowering-Plant correspond to the sporangiferous leaves, sporangia, and spores, of a Fern?

5. Describe and compare with one another the respiratory and excretory organs of Lumbricus, Astacus and Anodon.

6. What are the principal morphological elements of which the Vertebrate skull consists? Compare with one another the skulls of a Dogfish and of a Frog.

7. Describe briefly, with figures, the development of Amphioxus up to the time of the appearance of the gill slits.

In what respects, as regards either structure or development, is Amphioxus more primitive than the higher Vertebrata?

8. What are the essential points of difference between Protozoa and higher animals (Metazoa)? Illustrate your answer by reference to the structure, physiology, and life history, of Vorticella and Hydra.

9. Compare the structure of a tadpole, about the time of the appearance of the limbs, with that of a frog, and describe briefly how the change from the one to the other is effected. Explain these changes.

FRIDAY, *June* 6, 1884. 1—2½.

PRACTICAL ANIMAL BIOLOGY.

1. DISSECT the Crayfish so as to show the digestive, reproductive, and excretory systems. Draw your dissection, and name the several parts shown.

2. Dissect the Mussel so as to show the kidneys, with the openings leading into and from them. Insert bristles into the orifices, and name them by means of labels.

FRIDAY, *June* 6, 1884. 4—5½.

PRACTICAL ANIMAL BIOLOGY.

1. DISSECT the earthworm so as to shew the nervous, excretory, and reproductive systems. Name the several parts of the systems by means of paper labels.

2. Remove the head-appendages of one side from the crayfish. Draw them and name their parts.

SATURDAY, *June* 7, 1884. 9—10½.

PRACTICAL ANIMAL BIOLOGY.

1. DISSECT the Frog so as to show the venous system as fully as possible. Draw your dissection, and name the several parts shown.

2. Mount microscopical specimens of (*a*) striated muscle, and (*b*) ciliated epithelium from the frog. Draw your preparations and name their parts.

SATURDAY, *June* 7, 1884. 12—2.

PRACTICAL ELEMENTARY BIOLOGY.

1. DISSECT the frog so as to shew as much as possible of its nervous system. Make a drawing of your dissection, and name on the drawing the several parts shewn.

2. Identify, draw, and briefly describe the specimen *A*.

3. Make microscopical preparations of the cone of Pinus. Sketch your preparation and name the various parts.

SATURDAY, *June* 7, 1884. 4—6.

PRACTICAL ELEMENTARY BIOLOGY.

1. DISSECT the frog so as to shew as much as possible of the arterial system. Make a drawing of your dissection, and name on your drawing the several arteries.

2. Identify and draw the specimen *A*, naming on your drawing the several parts shewn.

3. Make preparations of the ovule of the flower provided. Sketch your preparations, and name the various parts.

MONDAY, *June* 9, 1884. 9 A.M.—12 M.

CHEMISTRY.

1. ANALYSE the phenomena which occur when a candle burns, pointing out what portions of the total change are strictly chemical, and what portions are partly chemical and partly physical.

2. By comparing and contrasting the oxides of nitrogen with the oxides of chromium,—*or*, the oxides of phosphorus with the oxides of lead,—illustrate the meaning of each of the terms, *anhydride*, *normal* (or *basic*) *oxide*, *peroxide*.

3. How can it be proved experimentally (1) that three phosphoric acids exist, (2) that one of these acids is monobasic, another tribasic, and the third tetrabasic?

4. It is required to prove that the formula CuO correctly represents the composition of black oxide of copper; state exactly how you would proceed.

5. Describe and formulate reactions whereby each oxide of nitrogen may be prepared, directly or indirectly, from nitric acid.

6. Under what conditions can the processes represented in the following equations be accomplished?

$$(1)\ 2NH_3 = N_2 + 3H_2;\quad (2)\ S_2 + 2H_2 = 2SH_2;\quad (3)\ Cl_2 + H_2 = 2HCl.$$

Shew that these reactions lead to the conclusions (1) that *the atom of nitrogen is trivalent*, (2) that *the atom of sulphur is divalent*, (3) that *the atom of chlorine is monovalent*, and clearly explain the statements in italics.

7. Illustrate the phenomena summed up in the term *isomerism* by two examples of carbon compounds, one chosen from the hydrocarbons and one from the alcohols or acids. Give an outline of the usually adopted explanation of isomerism.

8. Describe the preparation of urea from ammonium cyanate. What is meant by saying that 'urea is the amide of carbonic acid'? How can urea be detected in urine?

MONDAY, *June* 9, 1884. 1½—4 P.M.

MECHANICS AND HYDROSTATICS.

1. DISTINGUISH between the weight of a body and its mass. How does the weight of a body vary in different latitudes, and how would it be affected if the body were removed to the surface of the moon? Shew how the intensity of gravity at the surface of a planet fixes a superior limit to the dimensions to which its inhabitants can attain.

2. Explain the principle of the lever and define *the moment of a force about a point.*

Shew how to graduate some form of steelyard.

3. What is the centre of gravity of a body?

Shew how to find the centre of gravity of all the black squares on a chess-board.

4. What is meant by the mechanical advantage of a system of mechanism?

Shew how to find the mechanical advantage of a smooth differential pulley, assuming the truth of the principle of the conservation of energy.

5. What is meant by the hydrostatic pressure *at a point?*

Shew how to find the pressure at any point beneath the surface of still water.

6. Shew how to find the specific gravity of a solid lighter than water by means of the balance. How would you find the specific gravity of a piece of sugar? How might a specific gravity balance be employed to determine the strength of a saline solution?

7. Explain fully the construction of some good form of barometer. If a small quantity of air find its way into a barometer tube how will it affect the readings of the barometer at different heights?

8. What is the use of an air vessel in connection with a force pump? Explain how the air vessel may be replaced by a standpipe made of some extensible and elastic material.

TUESDAY, *June* 10, 1884. 9 A.M.—12 NOON.

HEAT, LIGHT, AND ELECTRICITY.

1. DESCRIBE the thermometric scales of Fahrenheit, Celsius (centigrade) and Reaumur, and express 59°F. on the centigrade scale.

2. Define the coefficient of *cubic* expansion of a substance, and shew that it is sensibly equal to three times the coefficient of *linear* expansion.

How may the coefficient of cubic expansion of crown glass be determined?

3. Explain how you would measure the specific heat of a piece of zinc, mentioning the chief precautions necessary to prevent errors in the result.

4. Explain the meaning of the terms *conduction*, *convection*, and *radiation*, as applied to heat. State fully what happens when a kettle of water is placed a few inches above a clear fire, shewing the parts played by conduction, convection and radiation respectively, and explain the "singing of the kettle."

5. State the laws of refraction of light.

Shew by a figure how to determine geometrically the apparent position of an object at the bottom of a lake as seen by an eye looking in a direction inclined at 30° to the horizon.

6. How would you compare the relative illuminating powers of a gas flame and an incandescent lamp?

Describe Wheatstone's photometer.

7. Mention the chief methods by which the distance of an object, a few feet away from the observer, can be judged by a person enjoying binocular vision.

Mention any experiment which illustrates the comparative blindness of the *fovea centralis* for blue light.

8. What do you understand by electric *induction?* Describe the action of some apparatus from which unlimited supplies of electricity can be furnished by electrostatic induction.

9. What is meant by the capacity of a Leyden Jar? Explain why the capacity of a Leyden Jar is much greater than that of a simple conductor of the same size, and state how the capacity would be affected by increasing the thickness of the glass.

10. What do you understand by the terms *electromotive force* and *resistance?*

You are supplied with a piece of platinum wire of two Ohms resistance and with two battery cells each of one Ohm resistance. Compare the rates at which heat is generated in the wire (i) when the cells are in series, and (ii) when they are in parallel circuit.

11. Mention any important difference between the phenomena of magnetic and electric induction. State as fully as you can what happens when a magnet attracts a piece of soft iron.

12. Explain the action of some magneto-electric generator suitable for medical purposes.

TUESDAY, *June* 10, 1884. 1½—4½ P.M.

PRACTICAL CHEMISTRY.

A contains a metallic oxide, B a simple salt, and C an aqueous solution of an acid. Analyse each qualitatively; and from these substances prepare *pure* specimens of (1) a salt containing the metal in A and the acid in C, and (2) a double salt containing the metals in A and B and the acid in B.

D is an aqueous solution of caustic potash. Find the strength of this solution in grams of KOH per c.c. of solution, by the use of the solution of hydrochloric acid E, and the standard caustic potash solution F.

1 cc. *of* F *contains* ·0112 *grams* KOH.

[K = 39·1, O = 16, Cl = 35·5.]

Write a clear account of all the experiments you perform and the conclusions deduced therefrom.

WEDNESDAY, *June* 11, 1884. 9 A.M.—12 M.

PRACTICAL CHEMISTRY.

A and B are simple salts; find the metal and the acid in each. Conduct experiments with these salts to illustrate, as far as can be done by qualitative methods, (1) an ordinary process of double decomposition between two salts, (2) the normal action between a salt and an acid.

C is an aqueous solution of hydrochloric acid. Find the amount of this acid (in grams) in 10 c.c. of the solution, by the use of the solution of caustic potash D, and the standard hydrochloric acid E.

1 c.c. *of* E *contains* ·0073 *grams* HCl.

[K = 39·1, O = 16, Cl = 45·5.]

Write a clear account of all the experiments you perform and the conclusions deduced therefrom.

SECOND EXAMINATION FOR M.B. DEGREE.

TUESDAY, *June* 10, 1884. 9 A.M.—12 M.

PHYSIOLOGY.

1. DESCRIBE the physical microscopical and chemical changes which occur in the submaxillary gland upon stimulation of the chorda tympani and sympathetic nerves respectively.

What differences would occur if atropin were first given?

2. What is the normal temperature of the body?

In the cold-blooded animal the temperature of the body is dependent upon that of the surrounding medium; why is this not the case in the warm-blooded animal? By what means can the behaviour of the warm-blooded animal in this respect be assimilated to that of the cold-blooded?

3. Describe the course of the nerves which are known to act upon the heart in the case of the dog or the rabbit.

Describe the effect upon the different attributes of the heart beat of section and stimulation of these nerves.

4. Define the "vital capacity" of the lungs. Describe the changes which take place in the air and in the blood passing through the lungs during respiration.

What is meant by Apnœa and Dyspnœa? In what different ways can dyspnœa be caused, and how do the different kinds of dyspnœa so caused differ from one another?

5. What is glycogen? What is its source and destination?

By what methods can an appreciable amount of sugar be made to appear in the urine? how would you explain the occurrence of sugar in these cases?

6. Describe the differences exhibited by the three following animals:—

(1) Possesses only the spinal cord.

(2) Possesses the medulla oblongata as well as the spinal cord.

(3) Possesses the whole of the nervous system with the exception of the cerebral convolutions.

TUESDAY, *June* 10, 1884. 2 to 4 P.M.

1. WHAT relation does the grain bear to the ounce, the pound, the pint and the gramme?

2. Describe the method given in the British Pharmacopœia for the preparation of Ferri et Quinæ Citras. By what chemical tests would you distinguish Ferri et Ammoniæ Citras from Ferrum Tartarizatum?

3. Give the chief steps in the preparation of Morphiæ Hydrochloras. By what chemical tests is it recognised?

4. A specimen of Sulphate of Quinia is contaminated with magnesia, cane sugar, and cinchonia; how would you detect the presence of these substances?

5. Enumerate the Pharmacopœial preparations containing Opium, stating the amount of this constituent in each.

6. What ingredients are contained in

Infusum Gentianæ Compositum,
Mixtura Sennæ Composita,
Pilula Ipecacuanhæ cum Scillâ.
Lotio Hydrargyri nigra?

7. How is Calomel prepared? A specimen contains corrosive sublimate: how would you detect the presence of this impurity?

8. Give the Pharmacopœial names of the following:

Goulard's lotion,
Blue pill,
Dover's powder,
Spirit of Mindererus,
Griffith's Mixture,
Green ointment.
Plummer's pill.

WEDNESDAY, *June* 11, 1884. 9—12.

HUMAN ANATOMY.

1. DESCRIBE the different portions of the Colon, and specify the position, peritoneal and other relations, vascular supply and peculiarities of minute structure of each portion.

2. Describe the veins which convey blood from the brain, giving the course, relations and termination of each.

3. Give the course, relations and branches of the right pneumogastric nerve, and enumerate the principal points wherein it differs from the left.

4. Give a description of the anatomy of the lachrymal apparatus.

5. Describe the position, attachments and structure of the true vocal cords, and give the names, attachments and actions of the muscles which alter their tension.

6. Describe the muscles which flex the toes and the courses and relations of their respective tendons.

THURSDAY, *June* 12, 1884. 9 A.M.—1 P.M.

PRACTICAL PHYSIOLOGY.

1. THE specimens *a*, *b*, *c*, are in a weak solution of spirit; stain and mount one of each specimen in glycerine and in canada-balsam.

Describe the characteristics of your preparations accompanying your description with sketches.

2. Make preparations to shew the structure of medullated nerve fibre, describing in each case your method of procedure.

3. The samples of urine *A* and *B* both contain sugar, determine which contains the most. Describe carefully your method of analysis with the results of each successive step.

N.B. An accurate quantitative analysis is not required.

June 13, 1884. 9 A.M.—12 M.

PRACTICAL ANATOMY.

MAKE the dissection required by the written slip placed with your part and leave your dissection fastened to the table by tacks and string in such a way as to show it to the greatest advantage. Place pointers beneath those structures which you wish to make especially prominent. Pin numbers upon all the structures which you expose and leave a written key to the numbers.

THIRD EXAMINATION FOR M.B. DEGREE.

PART I.

TUESDAY, *May* 13, 1884. 9 A.M. to 12 M.

PRINCIPLES OF SURGERY.

1. DESCRIBE the various appearances which may be presented by Senile Gangrene, and the causes which give rise to the disease.

2. A circular piece of skin two inches in diameter is removed from the surface of the body. Describe the process by which the wound is repaired, and mention the points in which the resulting scar differs from the skin which it replaces.

3. Give the causes and symptoms of Chronic Ostitis, and describe the pathological changes to which it may give rise.

4. Describe the various modes of arresting hæmorrhage from an external wound, and state the circumstances in which they are severally applicable.

5. What are the causes of Varix in the lower limbs? Describe the pathological conditions which it may induce.

TUESDAY, *May* 13, 1884. 2 to 4.30 P.M.

OBSTETRICS.

1. WHAT is the anatomical source of postpartum hæmorrhage, the placenta and membranes being expelled; and what relation is there between it and uterine contraction and retraction?

2. State the bulk and position of the uterus on the fourth day after delivery; also the state of the lochia at the same time, including morbid conditions of the lochia and their treatment.

3. Give the diagnosis of a simple flat pelvis, the conjugate diameter measuring three inches. How would you manage labour at full term in this case?

4. Give the diagnosis and treatment of a simple parovarian cyst of the size of a five months' pregnancy.

THIRD EXAMINATION FOR M.B. DEGREE.

PART II.

WEDNESDAY, *May* 14, 1884. 9 A.M. to 12 M.

PATHOLOGY.

1. DISCUSS the pathology of Diabetes Mellitus.

2. State the view you take of the pathogeny of Fever, and the evidence on which it is based.

3. Describe the effects produced by the cold and warm bath, by the cold affusion and warm pack in states of fever.

4. What is the chief locus of urea-production in the body? In what conditions is the total amount increased, and in what is it diminished?

5. Explain the meaning of the term "inhibitory action;" give instances of it (*a*) in health, (*b*) in disease.

6. Define Hemicrania. Give its symptoms and treatment.

WEDNESDAY, *May* 14, 1884. 2 to 4.30 P.M.

ELEMENTS OF HYGIENE.

1. GIVE examples of unhealthy occupations, your reasons for regarding them as unhealthy, and the mode of living you would direct so as to render them, respectively, as little injurious as possible.

2. How many patients would you put into a ward 80 feet long, 25 feet wide and 20 feet high? How many cubic feet of fresh air per hour should (as a minimum) be admitted, so as to maintain the air of the ward in the requisite degree of purity?

3. If called upon to attend a case of Scarlet Fever in a private house, by what means would you endeavour to prevent the infection of other members of the family?

4. State and answer the objections that have been raised to Vaccination.

Mention the several precautions required to ensure its efficiency, and the occasional ill effects through want of due precaution.

5. Enumerate the various ways in which air tainted with the miasm of Enteric Fever has been known to gain entrance into houses or cause pollution of the water-supply.

6. Draw up rules for the bringing up, education and choice of pursuit in life of a boy whose father was insane.

THURSDAY, *May* 15, 1884. 9 A.M. to 12 M.

PRINCIPLES AND PRACTICE OF PHYSIC.

1. DESCRIBE the usual course and symptoms of *typhlitis*, and give an outline of its treatment. For what other diseases might it be mistaken?

2. What combination of symptoms would justify the diagnosis of cerebral tumour in a male adult?

3. Enumerate, in the order of their frequency and value, the bodily signs of *congenital syphilis* in an infant.

4. Describe the several characters of pulse commonly met with in (1) mitral stenosis, (2) aortic obstruction, (3) aortic reflux respectively.

5. Give some account of *herpes zoster* including its general symptoms and mode of attack. Mention the other varieties of herpes with short definitions of each.

6. Trace the course of the ulceration of *typhoid fever* with reference to the age of the fever, the situation and character of the ulcers and the process of cure.

THURSDAY, *May* 15, 1884. 2 to 4 P.M.

MEDICAL JURISPRUDENCE.

1. STATE the circumstances which would lead you to conclude in a given case that death was caused by drowning.

2. Describe the injurious effects resulting from the abuse of (*a*) Chloral, (*b*) Alcohol.

3. Give an opinion on the following case. A woman who seven months previously had borne twins at term, after suckling one, laid it down on a bed in the room, and proceeded to nurse the other. When about twenty minutes had elapsed she went to look at the first child, and found it dead. A post mortem-examination was made, and the cause of death ascertained.

4. Mention certain modes of death which tend respectively (1) to hasten and (2) to retard the occurrence of *rigor mortis*. Give, also, the order in which rigor mortis invades the several parts of the body and the order in which it leaves them.

5. The appearance of *bruising* on a body recently dead is adduced in support of a charge of criminal violence. The defence is that the apparent bruising is cadaveric discoloration or that it is purpuric. State the principles that would guide you in giving a medical opinion upon such a case.

MONDAY, *May* 19, 1884. 2.30 P.M.

PRESCRIPTIONS.

(*To be written without abbreviations in form to be sent to druggist.*)

WHAT remedies would you prescribe in the following diseases?

1. Subacute gastric catarrh in (*a*) its earlier and (*b*) its later stages.

2. In catarrhal Icterus.

3. In non-tubercular Meningitis.

4. Write a prescription suitable for acute bronchitis in a previously healthy adult; adding, in prescription form, any directions you may deem necessary as to local applications, &c.

NATURAL SCIENCES TRIPOS.

PART I.

SATURDAY, *May* 17, 1884. 9—12.

1. DRAW diagrams shewing (1) the velocity, (2) the acceleration of a body which describes a circle with constant velocity, and shew how Newton's second law of motion can be applied to prove that a constant force is acting on the body urging it towards the centre of the circle.

If the body weighs 5 grammes and goes round a circle of 20 centimetres radius 72 times in a minute, find the energy of the body in ergs.

2. A white solid, soluble in water, is heated; it melts, bubbles of gas are given off, and a reddish-yellow powder, insoluble in water, remains.

Do you regard this process of change as belonging to the sphere of chemistry or to that of physics? How would you propose to conduct the further examination of the change?

3. Describe briefly the following minerals: apatite, cinnabar, wulfenite, smaltine, azurite, cuprite, beryl, boracite, topaz and harmotome.

4. Explain fully the various processes by which the disintegration of rocks is effected, describing in illustration the mode of weathering of one igneous, one calcareous, and one arenaceous rock. What becomes of the various products of disintegration?

5. Describe the observations and experiments necessary to demonstrate the essential difference between a plant which does and one which does not, contain chlorophyll.

6. Describe and compare with one another the digestive, nervous and excretory systems, and the condition of the cœlom or body-cavity in a Leech, an Earth-worm, and a Trematode.

What conclusions do you draw as to the mutual affinities of these three animals?

7. Discuss the mechanism of the vertebral column as a whole. Describe the modifications which the several vertebræ undergo in different regions for the purpose of allowing of movement in different directions.

8. Give a brief account of the histological changes which take place in ossification in cartilage. Compare these changes with those which take place in ossification in membrane. Explain as fully as you can the manner in which bone is absorbed.

SATURDAY, *May* 17, 1884. 1—4.

9. POINT out the advantages and disadvantages of the mercury thermometer.

The temperature of melting silver is said to be 954° C. State precisely, with due regard for experimental possibilities, what you understand by this statement.

10. When the oxides FeO, Fe_2O_3, and Fe_3O_4 are acted on by acids, the first and second do form, while the third does not form corresponding salts: more fully describe the reaction of acids on each of these oxides with the view of illustrating (1) the action of acids on oxides, (2) the meaning of the expression *salt corresponding to a given oxide.*

11. Explain the following terms: plane of symmetry, zone, rational indices, system of crystallisation and merosymmetry.

Make a freehand drawing of a Cubic crystal with the forms {111} {112} {110}, the first only being prominently developed.

12. "It is not too much to say that every spot which is now dry land has been sea at some former period, and that every part of the space now covered by the deepest ocean has been dry land" (Lyell).

Give the arguments for and against this view, directing your attention especially to the latter part of the quotation.

13. What is a tissue? Give a general account of the chief kinds of tissue found in plants.

14. In what Invertebrates are eyes present, and what are the chief forms they assume? What are the distinctive characters of the Vertebrate eye?

15. Describe the gross anatomy of the spleen, its situation and relations to other organs (including the peritoneum), its blood-vessels and nerves.

16. Describe fully the minute structure of a villus of the small intestine. How far is the statement that fat is digested in the small intestine correct? In what way is fat absorbed?

MONDAY, *May* 19, 1884. 9—12.

17. EXPLAIN the formation of an image of a distant object by a transparent sphere.

What conclusion as to the relations of heat and light can be inferred from the fact that the position of maximum heating effect of the sun's rays after passing through a sphere coincides very approximately with the optical image formed?

18. Let the equivalent of an element be defined as the smallest quantity by weight which combines with one part by weight of hydrogen or eight parts by weight of oxygen; describe three methods by which the equivalent of a given metallic element could be determined.

19. How are the optical characters related to the crystallographic axes in the different systems of crystallisation?

20. Give an account of the various kinds of faults, explaining by means of plans and diagrams the real and apparent character of the displacements produced on the beds affected. Where possible refer to instances in Great Britain in illustration of your answer.

21. Describe the general structure and the modes of reproduction of Eurotium (or Penicillium) and Mucor. What are the essential points of resemblance and difference between the two plants?

22. Describe, with diagrammatic figures, the principal modifications presented by the heart and great arteries in Vertebrates. In what Vertebrates does direct mixture of arterial and venous blood occur within the heart itself?

23. Enumerate (without describing) the muscles attached to the hyoid bone, and point out their various functions.

24. Give an account of the chemical and physical changes which take place in a skeletal muscle when it contracts.

MONDAY, *May* 19, 1884. 1—4.

25. STATE the characteristic properties of a musical note. To what properties of undulation do they respectively correspond?

Describe very briefly experiments by which the correspondence is proved.

26. Put into words the exact information conveyed by the following chemical equations; (*a*) $2NH_3 = N_2 + 3H_2$; (*b*) $BaCl_2 + H_2SO_4 + xH_2O = BaSO_4 + 2HCl + xH_2O$. Explain each of these equations in terms of the molecular and atomic theory.

27. Calculate the chemical formula of a mineral having the following composition:—

Silicon	29·96
Aluminium	9·79
Potassium	14·06
Oxygen	46·19
	100·00

assuming for the atomic weights of the elements the numbers 28, 27·3, 39 and 16 respectively.

Name the mineral and describe its characters.

28. Tabulate the Cretaceous series, and describe the lithological and palæontological characteristics of the subdivisions in the Cambridge area, mentioning the localities where they may be observed.

29. What is a spore? Let your illustrations include reference to Phanerogams.

30. Compare with one another as regards structure, position and mode of formation the hard skeletal parts, whether external or internal, of a Starfish, a Crayfish, a Snail, and a Dogfish.

Explain in each case what provision exists for growth both of the skeletal parts and of the whole animal.

31. Compare the arrangement of the arteries in the hand with that of the arteries in the foot, and account for the differences which you notice.

32. Describe the forms of sensory nerve endings which are found in the tip of the finger. What do you understand by the term muscular sensation? Explain how you would test the truth of Weber's Law in the case of the muscular sense.

TUESDAY, *May* 20, 1884. 9—12.

33. DEFINE electrical potential and trace the analogy between electrical potential and temperature.

Shew that the energy of an insulated conductor charged to potential V, by Q units of electricity, is $\frac{1}{2} Q.V$. How will the energy of the conductor be affected if it is surrounded by an uninsulated metallic screen, its charge remaining the same?

34. Describe methods of preparation of, and the more important points of resemblance and difference between, *either* (1) the oxides of nitrogen, (2) the oxides of sulphur, *or* (3) the oxyacids of chlorine.

35. Describe the minerals which are used as iron ores.

36. Define the terms *Plutonic* and *Volcanic* as applied to igneous rocks, and explain in detail how you would proceed to determine by investigation in hand-specimens and in the field, whether a given rock should be classed as *Plutonic* or *Volcanic*.

37. What are the characters of the order Compositæ? What are the allied orders, and how do they differ from the Compositæ?

How may the Compositæ be divided into a few great sub-orders or tribes?

38. What parts of the body are of epiblastic origin?

Describe briefly, with figures, the mode of formation of these parts in either a Chick or Mammal.

39. Describe the mode of origin, the arrangement and connection with lymphatic glands of the lymphatic vessels in the leg.

40. Give an account of the nervous mechanism of respiration.

TUESDAY, *May* 20, 1884. 1—4.

41. DEFINE the magnetic moment of a magnet and state the laws which express the direction and magnitude of the force exerted by an electric current passing along a circular wire upon a magnetic pole at the centre of the circle.

A battery-cell of constant electromotive force and negligible resistance is connected up with two galvanometers A and B arranged first in series and secondly in multiple arc. In the first case the deflection of A is 25 and that of B, 46, and in the second case the deflection of A is 43. Find the deflection of B and compare the constants and the resistances of the two galvanometers, assuming that the currents in each are always proportional to the deflections.

42. A certain metal forms a compound with each of the halogen elements, these compounds are easily soluble in water, and are volatile only at a very high temperature; the normal carbonate of the metal is also easily soluble in water, it is not decomposed by heat alone; the oxide very readily reacts with water to form a soluble hydroxide.

In what group of elements would you place this metal, and what properties would you expect to find as characterising its nitrate, sulphates and phosphates?

43. Give a full account of iron pyrites and of towanite.

44. Give the characters of the oldest rocks in Great Britain and the localities where they occur. What different views are held as to their geological position? Name also the deposits in which the earliest traces of life occur in the British area, and describe the character of the fauna.

45. Give an account of the structure, growth, and distribution of what is described under the heading "Cork."

46. What are the leading modifications presented by the urinogenital system in the different groups of Vertebrates?

Do you suppose the connection between the urinary and reproductive organs to have been inherited by Vertebrates or acquired by them?

47. Describe the insertions of the flexores sublimis and profundus and extensor communis digitorum manus, and point out the arrangements by which the tendons of these muscles are kept in position on the fingers.

48. How far is the secretion of water which takes place from the sub-maxillary gland when the chorda tympani nerve is stimulated due to increased blood-pressure in the vessels of the gland? Describe the chief experiments by which the effect of variations of blood-pressure on the amount of water secreted by the kidney can be observed. How do you explain the different effects of variations of blood-pressure on the sub-maxillary gland and on the kidney?

WEDNESDAY, *May* 21, 1884. $\begin{cases} 10\text{—}1. \\ 1\text{—}4. \end{cases}$

PRACTICAL PHYSICS.

Candidates may select one question from each of the Sections A, B, *and* C.

Questions from Section D *may be substituted for not more than two of those from* A, B, *and* C.

Tables of constants, logarithms &c. may be used to facilitate calculation.

The answers must include details of the observations and the precautions for accuracy.

A.

1. DETERMINE the rate of rotation of the given disc.

2. Determine as accurately as you can the area of the given small figure.

3. The specific gravity of the given solution is 1·156. Deduce the weight of the Nicholson hydrometer.

4. Tune the two forks to give four beats a second, stating which is the higher.

5. Compare the values of Young's modulus for brass and copper.

B.

6. Assuming the accuracy of the given thermometer, find the index error of the aneroid barometer.

7. Determine the relative humidity of the air by the wet and dry bulb thermometers and test the result by Regnault's hygrometer.

8. The latent heat of steam is 536. Find the temperature of the steam issuing from the given vessel.

9. Find the magnifying power of the given lens.

10. Place the given object in the principal focus of the given lens.

11. Find by an optical method the radius of curvature of each face of the given double concave lens.

C.

12. Adjust a Thomson galvanometer, arranging the control magnet so that the instrument is, approximately, one and a half times as sensitive as it would be if the magnet were removed.

13. The reduction factor of the given tangent galvanometer is ·0028 (C.G.S. units). Deduce that of the Thomson galvanometer.

14. Trace the directions of the lines of horizontal force in the resultant field due to the earth and the given bar magnet (placed E. and W.) and find from your diagram the strength of either pole of the magnet [H = 0·180 C.G.S. units].

15. The two given Battery cells are of equal E.M.F. and resistance. Compare, without additional apparatus (other than a key and connecting wires), the resistance of one of the cells with that of the given galvanometer.

D.

16. Determine as accurately as you can the length of the given line.

17. Find the number of grains in a gramme.

18. Determine the specific gravity of the glass beads by the specific gravity bottle.

19. Determine experimentally the water equivalent of the given calorimeter.

20. Test the fixed points of the given thermometer.

21. Determine the specific heat of the given powder by the method of cooling.

22. Find the index of refraction, for sodium light, of one of the given specimens of glass.

23. The colour match equation for the set of discs red, green, blue, black and white is $-60g + 14{\cdot}5w - 26{\cdot}5r - 13{\cdot}5bl + 75{\cdot}5bk = 0$; find that for red, yellow, black, white and blue, and deduce that for green, blue, yellow, black and white.

24. Compare the magnetic moments of the two given magnets.

25. Determine the resistance of the given galvanometer.

WEDNESDAY, *May* 21, 1884. 9 A.M.—12 NOON.

PRACTICAL CHEMISTRY.

A is a simple salt. Find the metallic and acid constituents; and from this salt prepare small specimens of (1) the sulphate of the metal, (2) an aqueous solution of the acid in the salt.

B is an aqueous solution of an acid, and C and D are aqueous solutions of an alkali. Determine how many cubic centimetres of solution D are equivalent to 10 cc. of solution C, as regards power of neutralising unit volume of the acid solution B.

Write a full and clear account of all experiments actually made, and of the reasoning whereby the conclusions you arrive at are gained.

WEDNESDAY, *May* 21, 1884. 2—5 P.M.

PRACTICAL CHEMISTRY.

B is a mixture of sand and a certain simple salt. Find the qualitative composition of the salt; separate the salt from the admixed sand, and prepare small specimens of (1) the hydroxide, (2) the oxide, of the metal contained in the salt.

C is a dilute aqueous solution of hydrochloric acid; D is a dilute aqueous solution of sulphuric acid, 1 cc. contains 4·9 milligrams H_2SO_4; E is a dilute aqueous solution of caustic potash. Find the milligrams of HCl in 1 cc. of solution C. [S = 32, O = 16, K = 39·1, Cl = 35·5.]

Write a full and clear account of all experiments actually made, and of the reasoning whereby the conclusions you arrive at are gained.

FRIDAY, *May* 23, 1884. 9—12.

PRACTICAL BOTANY.

I. MAKE preparations of the ovules of A; draw and describe your preparations.

[Not more than one slide to be sent up.]

II. Describe B in technical language.

III. What can you discover, by an examination of C, about the manner in which it is fertilised?

IV. Identify the microscopic preparations exhibited; and point out, in the *briefest possible* manner, the characteristic features which enable you to identify each specimen.

FRIDAY, *May* 23, 1884. 1—4.

GEOLOGY (PRACTICAL EXAMINATION).

I. *Questions for written answers.*

1. DESCRIBE accurately the genera 1, 2, 3, 4. Give the name, zoological position and geological range of each.

2. Name the rock specimens 5, 6, 7, 8, mentioning the characters by which you identify each.

3. Point out the peculiarities in the fossilization of the specimens 9—12.

II. *Oral Examination.*

SATURDAY, *May* 24, 1884. 10—1.

PRACTICAL PHYSIOLOGY.

1. STAIN and mount two sections from each of the glasses labelled (*a*), (*b*), (*c*) respectively. Give an account of what you do. Briefly describe your mounted specimens, and make a rough sketch of one of each pair of specimens.

2. What substances of physiological importance are contained in *A*? Describe in detail your method of analysis.

(You need only test for proteids, ferments and the constituents of the bile. Not more than thirty-five minutes can be allowed for the analysis.)

3. Take a tracing on a revolving drum of the movements of a frog's heart, and of the effect on these movements of stimulating the vagus nerve.

4. Describe in detail the method you would use to obtain a gold chloride preparation of the septum auricularum of the frog's heart.

5. Give a detailed account of the method of preparing glycogen.

SATURDAY, *May* 24, 1884. 2—5.

PRACTICAL PHYSIOLOGY.

1. STAIN and mount two sections from each of the glasses labelled (*a*), (*b*), (*c*) respectively. Give an account of what you do. Briefly describe your mounted specimens and make a rough sketch of one of each pair of specimens.

2. What substances of physiological importance are contained in *A*? Describe in detail your method of analysis.

(You need only test for proteids, ferments and the constituents of urine. Not more than thirty-five minutes can be allowed for the analysis.)

3. Demonstrate the effect on the beat of a frog's heart of electrical stimulation of the sinus venosus. Demonstrate also the effect on the heart of ligaturing it (*a*) at the junction of sinus venosus and right auricle, (*b*) at the junction of the auricles and ventricle.

4. If a recently killed animal were given you and you were required to harden the kidney, the stomach, and the retina, as a preliminary to the microscopic examination of these tissues, how would you proceed?

5. Give in detail the method of estimating quantitatively the amount of sugar in urine.

MONDAY, *May* 26, 1884. 9—12.

ZOOLOGY AND COMPARATIVE ANATOMY. PRACTICAL EXAMINATION.

1. DISSECT the Snail so as to exhibit as fully as you can the digestive, circulatory, and nervous systems. Name the parts shown by small paper labels.

2. Remove from the Cockroach and mount in glycerine the first and second pair of maxillæ. Put up also microscopic preparations (*a*) of striated muscle, (*b*) of tracheal tubes.

Draw your specimens and name their several parts.

3. Identify and draw the specimens *A* and *B*, naming on your drawings the several parts shown.

MONDAY, *May* 26, 1884. 1—5.

PRACTICAL MINERALOGY.

1. MEASURE one of the crystals *A*, *B*, *C*, *D*, determine its symmetry, make a stereographic projection of the poles, and assign indices to the faces.

2. Determine the symmetry of the models marked 1, 2, 3, 4: make a stereographic projection in each case and assign indices to the faces. Of what minerals are the models characteristic?

3. Determine by help of the blowpipe the chemical components of the minerals α, β, and give a full account of the experiments made.

4. From mere inspection describe the physical characters and give the name of each mineral present on the specimens labelled 1—6.

5. Describe the phenomena exhibited by the crystal sections *A*, *B*, *C*, *D*, when examined in convergent polarized light.

NATURAL SCIENCES TRIPOS.

PART II.

THURSDAY, *May* 29, 1884. 9—12.

1. DEFINE moment of inertia, and explain how the moment of inertia of a body may be determined experimentally.

State, with reasons, whether or not your method is applicable in the case of a body supported by a bifilar suspension.

2. State carefully the auxiliary observations that must be made in order to obtain the true weight in vacuo of a body of considerable dimensions but small specific gravity, and explain how the correction is applied.

3. Explain what is meant by elliptically polarized light. Shew how a circularly polarized beam can be obtained by means of a quarter undulation plate.

State as completely as you can the nature of the vibrations which constitute ordinary light.

4. The fundamental problem of chemistry has been described as being to trace the connections which exist between the composition and the properties of substances. Describe one or two investigations (one being chosen from the domain of organic chemistry) which shew how this problem has been attacked, and in some cases partially solved.

5. Give a concise account of the more important theories founded on electrical facts and conceptions which have from time to time been employed to explain the phenomena of chemical affinity.

6. Describe, as far as you can, the products of the condensation of ethaldehyde, and the products of the action of chlorine on the same aldehyde; pointing out more especially the connections which are generally regarded as existing between the structure of the aldehyde and the structures of the compounds obtained from it.

7. Shew that if the planes of a system have rational indices when referred to three given edges, they will have the same character when referred to any three edges of the system.

8. Give a full description of the minerals which are used as copper ores.

9. Give the chemical formula, the system of crystallisation, and one important locality for each of the precious stones.

10. State the observed facts concerning the motion of glaciers, and discuss the various theories put forward to explain them.

11. Explain the "law of succession of types" of life, giving the facts upon which the law is based.

12. Give a short description and classification of the Devonian beds, and discuss the different views held respecting their position in the geological series.

13. Describe the structure and disposition of the typical xylem elements in the secondary wood of Dicotyledons and of Coniferæ.

How would you demonstrate experimentally the cause of the appearance of the "rings of growth"?

14. Define the classes Zygosporeæ, Oosporeæ, Carposporeæ, and give examples of each class. Mention any forms which have to any extent characters intermediate between the classes as you define them.

15. Describe any observations which demonstrate the *transmission* of stimulus in plants. Include in your answer any suitable discussions as to the mode of transmission.

16. Classify the Gasteropoda, stating the essential characters of the several groups. Which do you consider the most primitive Gasteropoda, and with what other groups of animals do you suppose them to be allied?

17. Give an account of the leading points in the anatomy and development of the Cyclostomata (Marsipobranchii). What evidence of degeneration, if any, does the group present?

18. To what extent has the study (*a*) of palæontology, (*b*) of geographical distribution, afforded direct evidence in favour of the mutability of species?

19. Discuss the mechanical conditions which determine the size and form of individual muscles.

20. Describe the nerve supply of the human heart.

21. Describe the anatomy of the ciliary region of the eye.

22. State briefly the theory put forward by Alexander Schmidt with regard to the nature of the coagulation of the blood, and criticise this theory in the light of more recent researches.

23. Give an account of the facts upon which is based the view that in protoplasm the taking in of oxygen and the giving out of carbonic anhydride are independent processes.

24. Compare the effect of successive induction shocks upon cardiac muscle, skeletal muscle, and unstriated muscle.

THURSDAY, *May* 29, 1884. 1—4.

25. Explain the reflexion of sound at the end of an open and of a closed organ pipe, and deduce the possible notes for a pipe of given length.

Calculate the vibration frequency of a note sounded upon a closed organ pipe 120 centimetres long blown with air at a temperature of 15° C. knowing that the specific gravity of air at 0° C. and 760 mm. pressure is 0·001292, the specific gravity of mercury 13·59, the acceleration of gravity 981 $\frac{\text{cm}}{(\text{sec})^2}$, the coefficient of expansion of air ·00366 and the ratio of the two specific heats of air 1·406.

26. Give a sketch of the reasoning by which it can be shewn that the efficiency of a heat engine working between the freezing and the boiling points of water can never exceed $\frac{100}{373}$.

27. Shew that the minimum electromotive force required to decompose any electrolyte is numerically equal to the heat of combination (expressed in dynamical measure) of one electro-chemical equivalent of the ions which compose the electrolyte.

How has the apparent conduction of electricity through electrolytes without decomposition been explained?

28. It is undecided whether beryllium should be classed with those metals the oxides of which belong to the form MO, or with those which form oxides M_2O_3; give a summary of the more important facts and arguments on each side so far as regards (1) the value to be assigned to the atomic weight of beryllium, (2) a comparison of the properties of salts of beryllium with those of metals which form oxides MO and M_2O_3 respectively.

29. Aqueous solutions of two salts are mixed, and all the possible products of the chemical change are soluble under the conditions of the experiment. It is required to determine (1) the rate of chemical change under varying conditions of temperature, dilution, &c., and (2) the nature of the products of the change, temperature, &c., remaining constant; describe two experimental methods which have actually been employed for attacking this problem.

30. By a description of oxides of non-metallic elements illustrate schemes of classification of chemical compounds founded on (1) similarity of composition, and (2) similarity of reactions.

31. Explain by means of freehand stereographic projections the kinds of merohedry possible in a Hexagonal system.

What grounds are there for the recognition of such a system in the Mineral Kingdom?

32. Describe fully the minerals which contain beryllium.

33. Calculate the formula of a mineral having the following composition:

Copper	13·06
Lead	42·88
Antimony	24·34
Sulphur	19·76
	100·04

taking for the atomic weights 63·4, 207, 120 and 32 respectively.

Give the name of the mineral and mention its more important localities.

34. Describe the volcanic phenomena of the Lipari Islands.

35. State Whewell's views on the determination of geological equivalents, and give instances illustrating the difficulty of accurately correlating deposits in distant areas.

36. Describe a typical Trilobite, and state what is known as to the occurrence of locomotive appendages in trilobites. Mention the range in time of the group, naming the earliest and latest genera.

37. Explain what is meant by dichogamy. Give examples of different kinds of dichogamy. Discuss the advantages and disadvantages to the plant connected with dichogamy as compared with other arrangements of the sexes in plants.

38. Describe with figures the development of secondary roots in Phanerogams.

Compare the development of secondary roots in Phanerogams and in Vascular Cryptogams with the development of the root in the embryo.

39. Give such an account of the Hepaticæ and of the true Mosses as will suffice to show clearly what are the points of resemblance and difference between them.

What are the chief points of difference between Sphagnum and the other Mosses?

40. State the chief characters in the structure and life-history of the Sporozoa (Gregarinida, &c.). What position would you assign to the group zoologically?

41. What groups of animals are included under the term Arachnida, and what are the points in which these groups resemble or differ from one another? Discuss fully the relations of Arachnida to other Arthropoda both branchiate and tracheate.

42. Give a historical account of the principal views that have been advanced concerning the morphological constitution of the vertebrate head. What is the present condition of our knowledge on the subject?

43. Give an historical sketch of the progress of our knowledge of the relation to one another of the arterial, venous and lymphatic systems.

44. Describe the development of a joint. Discuss the phylogeny of any ligaments which appear to have been adapted from functionally different structures.

45. Describe the lymphatics of the scalp and face.

46. What is known about the origin of red blood corpuscles in adult vertebrates? Is there any reason for supposing that white blood corpuscles can be formed from any cells other than previously existing white blood corpuscles?

47. How far are the movements of the intestine under the control of the nervous system? What action has intestinal juice on food stuffs? What is known of the mode in which absorption takes place in the intestine?

48. What evidence is there of the existence of co-ordinating nervous centres in the spinal cord?

FRIDAY, *May* 30, 1884. 9—12.

49. Describe the general character of the different spectra of the same body under different conditions.

Give some account of the observed effects of the variation of pressure on the spectra of gases.

50. Give an account of Regnault's experiments upon the specific gravity of saturated steam at different temperatures.

How far do the results bear out the theoretical conclusion that the ratio of the specific gravity of steam to that of hydrogen is 9, at all temperatures and pressures? What explanations have been given of the difference?

51. Shew that the dimension of the absolute electromagnetic unit of resistance is the same as that of velocity.

Criticise the methods of determining a resistance in absolute measure from the point of view that the determination must be equivalent to the measurement of a length and a time.

52. Discuss as fully as you can the chemical changes which occur when (1) sulphuric acid, (2) nitric acid acts on metals.

53. A certain metal forms a somewhat deliquescent chloride which may be distilled at a moderate temperature; the oxide of this metal may be obtained by most of the methods usually applicable for forming the oxides M_2O_3 of the heavy metals; the sulphate is a stable salt; the normal salts of the metal shew a decided tendency to form basic salts. Describe, as fully as you can without going into great analytical detail, two methods whereby you would propose to determine the atomic weight of this metal.

54. Give an account of the researches of Fittig and others on the lactones, shewing the position assigned to these substances in a general classification of carbon compounds, and discussing the various stages of the changes which occur in their synthesis.

55. From a fragment of a crystal the following measurements were obtained:

de	39° 24′	*cm*	26° 12′	*hg*	30° 55′	*as*	43° 26′	*tg*	43° 31′	*gn*	69° 5′
el	26° 54′	*ml*	18° 20′	*gf*	30° 55′	*sb*	43° 26′	*gp*	43° 31′	*nb*	20° 55′
lp	42° 27′	*lo*	11° 21′	*fe*	30° 0′	*bc*	18° 44′	*pk*	18° 42′		
		og	34° 7′			*cd*	55° 40′	*ks*	27° 47′		

Make a freehand stereographic projection of the poles, determine its system, and taking *m* for the parametral plane find the indices of the other faces, and the parameters of the crystal.

56. Name the minerals which contain fluorine, and describe their modes of occurrence.

57. Describe the methods which have been invented for the qualitative analysis of the minerals in rock-sections by means of chemical reagents and the microscope.

58. Describe the beds which have been referred to an age intermediate between the White Chalk and Thanet Sand, and give their localities as well as their lithological and palæontological characteristics.

59. "In some cases a rock formation of no great actual thickness lying on the flanks of an ancient mountain chain appears to crop out over an enormous area, presenting the fallacious appearance of a massive formation of immense thickness but of monotonous petrological character, as though it were formed of alternations of similar strata following each other in parallel and unbroken order." Explain how this arrangement of strata may be produced, illustrating your answer with diagrams, and referring to sections seen in Great Britain or abroad.

60. Describe the method of investigation of the liquid cavities in quartz crystals, and state the conclusions which have been drawn, from a study of such cavities, with regard to the mode of formation of the rocks in which they occur.

61. Describe the movements of chlorophyll-bodies in relation to light.

Can you show that a parallelism exists between the movements of chlorophyll bodies and those of leaves?

62. Leaving out of consideration the whole question of reproduction, show what are the anatomical differences and resemblances between Ferns on the one hand and Phanerogams on the other.

63. Draw the floral diagram (1) of an Iris, (2) of a Labiate, discussing any points of interest connected with them.

Can you connect the character of the floral diagram or the general type of symmetry in either or both, with the needs of the flower for insect-fertilisation or pollen-protection?

64. Discuss fully the zoological position and affinities of *any one* of the following groups of animals:—Rotifera, Ctenophora, Gephyrea.

65. Classify the Amphibia, recent and extinct, stating the essential characters of the several groups. Discuss the relations of Amphibia (*a*) to lower, (*b*) to higher vertebrates.

66. Give an account of the leading modifications both anatomical, histological, and embryological, presented by the nervous system in the animal kingdom. What are the distinctive characters of the vertebrate nervous system, and what explanation can you give of them?

67. Trace the boundaries of the smaller omental sac.

68. Describe in general terms the condition of the skeleton at birth. What structural changes subsequent to birth would enable you to determine the age of a person from the skull?

69. Describe the origin of the rectus femoris and the insertions of the biceps flexor cubiti and semi-membranosus. What object is attained by the splitting up of the tendons in these instances?

70. Give an account of the production of heat in a muscle under varying circumstances. What is known as to the relation between the heat produced in a muscle and the amount of work done by it? What do you consider to be the nature of the metabolism which takes place in skeletal muscle?

71. In what ways can artificial diabetes be produced in mammals? State as far as possible in each case the chain of events which leads to the occurrence of sugar in the urine.

72. Give a concise account of Hermann's theory of the cause of the electric currents which may be observed in nerves under various conditions; if any part of this theory appears to you to be unsatisfactory give your reasons for thinking it to be so.

FRIDAY, *May* 30, 1884. 1—4.

73. Define the coefficient of self induction of an electric circuit.

Explain how it is possible for the electromotive force, due to self induction on breaking contact to be greater than that of the battery which maintained the original current.

74. Point out the difference in the behaviour of an isotropic and a crystalline magnetic body when placed in a magnetic field.

How does the intensity of magnetization alter with increase in the strength of the field?

75. Give a *short* historical account of *one* of the following:

(*a*) Action at a distance.

(*b*) The contact theory of electromotive force.

(*c*) The velocity of light.

(*d*) The dissipation of energy.

76. Give in detail two examples of chemical methods for determining molecular and atomic weights. (Assume Avogadro's law to be unknown.)

77. Compare and contrast the alcohols with the phenols, more especially as regards (1) methods of formation, (2) action of haloid acids or haloid phosphorus compounds, (3) action of oxidising agents.

78. Give an account of the methods of preparation, and of the properties of the nitro-paraffins. Describe the products obtained by the action of nitrous acid on these compounds, and indicate the relations which appear to exist between the structures of the parent substances and of the products obtained by the action in question.

79. Illustrate by examples the kinds of regular growth which have been observed in minerals crystallising in the Cubic system.

80. Name the varieties of garnet, and describe their characters.

81. Describe the method by which Fizeau determined the coefficient of expansion of a crystal on change of temperature. What results did he obtain?

82. Describe any observations which have been made with the view of determining the rate at which denudation is taking place at the present time. How far may such data be used in drawing conclusions as to the length of time over which the geological record is supposed to extend?

83. Describe the characteristic features of the Loess. Criticise the theories offered to explain its formation.

84. Describe briefly the Igneous rocks of the Charnwood Forest area, giving the microscopical characters of the leading types. Discuss their probable geological age.

85. Describe the structure, properties, and development of starch grains.

Discuss the appearance of chlorophyll in parts where it does not normally occur.

86. Give an account of respiration in plants. How would you demonstrate the respiration of Bacteria?

87. Give a comparative account of the structure of the Sporocarp in the different genera of the Rhizocarps, and point out the organs in Ferns which correspond to the different parts described.

88. Tabulate the various forms of asexual reproduction met with in the animal kingdom. In what animals does "alternation of generations" occur, and what explanation can you give of it?

89. State the distinctive characters of the group Cetacea and of its chief subdivisions. With which other group or groups of Mammalia do you consider Cetacea to be most closely allied, and why?

90. Examine critically the claims of the Nearctic region, of Sclater and Wallace, to rank as one of the primary zoogeographical divisions of the globe. What are the chief characters of the fauna of Alaska?

91. How is the erect posture maintained?

92. Describe the lymphatic spaces which surround the brain and spinal cord and point out their communications with the cavities within these organs.

93. Point out and account for the peculiar features of the human pelvis.

94. State briefly and criticise Kühne's view of the changes which proteids undergo in pancreatic digestion. Give an account of the attempts which have been made to determine the molecular constitution of proteids.

95. What varieties in the form of ending of motor nerves in the striated muscles of vertebrates are there, apart from the typical forms which occur in amphibia and mammalia?

What is known of the mode of ending of nerves in unstriated muscle? What evidence is there that these nerves are connected with peripheral nerve-cells?

96. What effect on the heart-beat in mammals has stimulation of the accelerator nerve fibres? What happens when these fibres and the cardiac branches of the vagus are stimulated simultaneously? Compare the effect on the heart of stimulating the cardiac nerves, with the effect on the sub-maxillary gland of stimulating the nerves which run to it.

SATURDAY, *May* 31, 1884. 9—12.

97. Account for the difference between sound and light in respect of the projection of shadows of opaque objects.

Adduce experimental evidence in support of your explanation.

98. State the grounds for supposing that the emissive and absorptive powers of a substance with regard to radiant energy are the same.

How does the energy radiated from a plate vary with the thickness of the plate?

99. Point out the practical difficulties in the determination of the coefficient of expansion of a solid and shew how each is surmounted in the more exact methods of making such determinations.

100. Give illustrations of the use of the expressions 'closed-ring molecules' and 'open-chain molecules' in the chemistry of the carbon compounds. State clearly the chief hypotheses involved in the employment of these terms, and indicate, by a description of at least one compound belonging to each class, the more important differences in the reactions of the two kinds of compounds.

101. Give a summary of the reactions employed in determining the relative positions of the OH groups in the three dihydroxybenzenes, and of the chief arguments based on these reactions. Shortly criticise these arguments, indicating those which in your opinion are the most trustworthy.

102. Criticise the following statement made by Berthelot: 'The quantity of heat evolved in a reaction measures the sum of the physical and chemical changes which occur in that reaction; this principle furnishes the measure of chemical affinities.'

103. Give an account of the experiments which have been made with a view to the production of crystallised silica.

104. Describe briefly the methods by which you would determine the optical constants of a given transparent crystal.

105. How far did Werner influence the progress of Mineralogy?

106. Describe the Northampton Sand and give its geological position. Point out the changes in the character of the formation which may be observed as the bed is traced northwards into Lincolnshire and Yorkshire and southwards into Gloucestershire.

107. Classify the Pleistocene deposits of East Anglia, and give a list of the fossils which occur in the various subdivisions.

108. State the diagnostic characters of the Brachiopoda, and give an account of the distribution in time of any six genera of the group.

109. Give a comparative account of the structure of stomata, and describe the development of a typical stoma. Give an account of the distribution of stomata.

110. Give the general features of the Flora of New Zealand and discuss its relations to other Floras.

What are the characteristics of the floras of oceanic islands?

111. Describe the structure of a Lichen, and give an account of the facts which support Schwendener's views on the nature of lichens.

112. Give an account of the chief morphological and embryological varieties presented by the cœlom. Discuss the relations of these several varieties to one another, and also the relations of the cœlom to the vascular and excretory systems.

113. What are the principal forms assumed by the mammalian placenta, and what do you consider to be their mutual relations? With which other group of vertebrates do you consider mammals most closely allied?

114. Discuss the probable meaning and origin of metamorphosis as seen in the following animals:—a nemertine (pilidium), a butterfly, a frog, and an axolotl. State generally how you would distinguish between inherited and acquired characters, and apply your principles to particular cases.

115. Describe the corpora geniculata of the human brain and their connections.

116. Contrast the skeletal characters of any two well-marked races of men.

117. Describe the various movements of the head upon the trunk and point out the joints in which they take place and the muscles by the action of which they are produced. To which series of vertebral muscles do the short vertebro-cranial muscles severally belong?

118. Describe the minute structure of the corpora quadrigemina. What is known of their function? Give an account of the pathological and physiological observations upon which our views of their function rest.

119. Give an account of the mode of development of spermatozoa in vertebrates.

120. Give an account of the changes which take place in the cells of vertebrates in 'indirect' cell division, distinguishing those changes which are widely spread from those which are special to particular kinds of cells. In what cells does 'direct' division occur?

SATURDAY, *May* 31, 1884. 1—4.

121. Distinguish between 'free' and 'forced' vibrations. What difference may be observed in the vibrations of two forks, slightly differing in pitch, maintained by the same intermittent electric current? How is the difference accounted for?

122. Define elasticity and rigidity. What is Poisson's ratio? What is the experimental evidence for and against considering Poisson's ratio constant for different solids?

123. Describe Cavendish's method of verifying the electrostatic law of force.

Point out the reasons for expecting a greater degree of accuracy from the method than from that employed by Coulomb.

124. Point out resemblances and differences between the trihydrides of nitrogen, phosphorus, arsenic and antimony, especially as regards (1) methods of formation, (2) behaviour towards oxidising agents, (3) properties of chief derivatives.

125. What are the conditions which must be fulfilled by a good process for determining vapour densities? Shortly describe the processes of Dumas and Victor Meyer, and compare these methods as regards their fulfilling the conditions you have already laid down.

126. Write a short essay on *one* of the following subjects:

(1) The dualistic and unitary systems of chemistry as illustrated by the work of Berzelius on the one hand and Dumas on the other.

(2) The progress of the chemistry of the carbon compounds since the publication of Kekulé's paper in 1858 establishing the tetravalency of the atom of carbon.

(3) The application of physical methods to investigate chemical questions.

(4) Chemical classification.

127. Name the varieties of quartz and opal, and state their distinctive characters.

128. Distinguish between pyroelectricity and thermoelectricity.

Describe any experiments relating to these subjects, which have been made with crystals.

129. Discuss the various systems which have been suggested for the classification of the Mineral Kingdom.

130. Name the chief subdivisions of the Chalk in the neighbourhood of Cambridge and their foreign equivalents, giving the palæontological characters of the several zones.

131. Describe the Coral reef area of Florida, and point out the differences in structure between the reefs of that area and those of the Pacific.

132. Give the succession of the Cambrian and Silurian systems in Bohemia as defined by Barrande, and correlate them with the equivalent beds in Great Britain.

133. Define Geotropism and Heliotropism.

Discuss the propriety of considering them as part of one phenomenon, pointing out especially what characters they have in common.

134. Discuss the importance of ferments in the physiology of the higher plants.

Compare and contrast the behaviour in general of formed with that of unformed ferments.

135. Give in greater detail the facts in fossil botany on which the following statement rests.

"That the dicotyledonous embryo and perfect exogenous wood with the highest specialised tissue known (the coniferous) should have preceded the monocotyledonous embryo and endogenous wood in date of appearance on the globe, are facts wholly opposed to the doctrine of progression." Published in 1859.

Discuss, in connection with the author's conclusion, the changes that have now taken place in the theory and practice of classification.

136. Describe the structure and development of either Sagitta or a Brachiopod. Discuss the affinities of the form you select with other groups of animals.

137. Distinguish between the fœtal type and the larval type of development. Enumerate and describe briefly the principal larval forms met with in invertebrates, stating in which groups the several forms are found. What phylogenetic conclusions can you deduce from their occurrence?

138. State briefly the main arguments on which the theory of natural selection is based. Point out in what respects it differs from earlier theories of evolution.

139. Point out the principal peculiarities in the arterial and venous systems of the brain, and show their relation to the conditions under which the circulation in this organ is carried on.

140. Describe the transverse commissures of the brain with the view especially of showing the parts which they connect.

141. Describe and account for the vestigial fold of Marshall.

142. Discuss the question of the existence of local vaso-motor centres. How do you explain the action of vaso-dilator nerves?

143. What changes take place in the cells of the mammary gland during secretion? What variations are caused in amount and percentage composition of cow's milk by variations in diet?

144. Give a brief account of the structure of the cochlea in birds and of the organ of Corti in mammals. Discuss the question of the function and mode of action of the organ of Corti.

MONDAY, *June* 2, 1884. 10 A.M.

PRACTICAL PHYSICS.

I.

1. ASSUMING the accuracy of the weights in the given box find the volume of water whose mass is one gramme.

2. Given a pulley, some weights, a watch and a beam compass, find the moment of inertia of the pendulum without dismounting it.

3. Determine the mean diameter of the given tube and calibrate it for every 5 centimetres.

4. Determine the relation between the couple due to the torsion of the suspension wires and that due to gravity in the bifilar suspension.

5. Determine as nearly as you can the mean temperature of a Bunsen flame.

6. Determine the density of the water vapour in the presence of a 5 per cent. solution of sulphuric acid and from your observations deduce the pressure of the vapour.

7. Determine the effect of variation of temperature upon the pitch of a tuning-fork.

8. Find the refractive index of the given specimen of glass.

9. Plane polarized light is incident upon a plate of Iceland spar, the plane of polarization being inclined at an angle of 45° to an edge of the plate. Trace the variation in the nature of the light reflected from the plate as the angle of incidence changes.

10. Compare the values of the horizontal intensity of the earth's magnetic force in the two marked positions.

11. Find the angle between the magnetic meridian and the line of collimation of the given telescope.

12. Find the electrical resistance of the brass and plugs of a resistance box.

13. Compare the maximum E.M.F. of polarization of platinum plates in dilute sulphuric acid with that of a standard Daniell cell and trace as far as you can the variation of the maximum E.M.F. of polarization with change of current density.

14. Determine the migration constant of copper in the electrolysis of a solution of copper sulphate.

15. The coefficient of self-induction of the given coil is $2{\cdot}40 \times 10^8$ c.; express its resistance in absolute measure.

II.

16. Determine the value of gravity from observations on the pendulum.

17. Determine by the manometer the specific gravity of caustic potash.

18. Determine the absolute pitch of the given fork by the siren.

19. Determine the position of the focal lines formed by the given prism and shew that they coincide when the deviation is a minimum.

20. Determine the wave length of sodium light by the biprism.

21. Determine the temperature at which the density of water is a maximum.

22. Find the coefficient of expansion of glass by the method of the weight thermometer.

23 Determine the earth's horizontal magnetic intensity as accurately as you can with the apparatus given.

24. Find the intensity of the given magnetic field at the point *A* and deduce its intensity at the point *B*.

25. Calibrate the wire of the B.A. bridge for electrical resistance.

26. Express in absolute measure the capacity of a condenser.

27. The value of G_1 for the given standard coil is 83·73 C.G.S. units. Determine G_1 for the given Thomson galvanometer.

TUESDAY, *June* 3, AND WEDNESDAY, *June* 4, 1884. 10 A.M.

PRACTICAL CHEMISTRY.

YOU are given solutions of (1) ferric sulphate in dilute sulphuric acid (the amounts of ferric sulphate and of free acid being stated), (2) dilute sulphuric acid, (3) standardised potassium permanganate; you are also given pure zinc.

Make an investigation of the reducing action of nascent hydrogen on ferric sulphate, noticing more especially the influence exerted on the process by varying (*a*) the relative amount of free acid present, (*b*) the temperature, and (*c*) the rapidity of evolution of hydrogen.

Write a clear account of the methods of procedure you adopt, and of the results of your experiments; and indicate the lines on which you would propose to continue the investigation from the point at which you are obliged to stop.

THURSDAY, *June* 5, 1884. 10—4.

PHYSIOLOGY. PRACTICAL WORK.

1. INJECT nitrate of silver into the blood-vessels of the spleen of a rat. Prepare and mount sections of this, and if you consider it necessary, prepare and mount sections of another fresh spleen, to shew as clearly as possible the structure of the tissue.

2. Describe the mounted specimens 1. 2. 3. 4. 5. Make a drawing of specimen 1 with the aid of a camera lucida, stating the amount of magnification of your drawing.

3. Estimate quantitatively with a saccharimeter the amount of sugar in (α) and in (β).

4. With the materials given you prepare peptone in as pure a state as possible.

5. Demonstrate the effect of a constant current on the irritability of a nerve.

or

Demonstrate the effect on the contraction of the ventricle of the frog's heart of passing dilute acids, dilute alkalies, and atropia sulphate through it.

6. Vivâ voce.

THURSDAY, *June* 5, 1884. 10 A.M.—5 P.M.

PRACTICAL BOTANY.

A. MAKE preparations showing the early history of the embryo-sac. Describe and discuss your preparations. (Helleborus.)

B, C. Describe the flowers B, C; give their natural orders, and show with what orders they are allied. (Cosmanthus and Tropæolum.)

D. Identify D, and write a short account of what interests you about it. (Cleistogamic flower of Viola.)

SATURDAY, *June* 7, 1884. 10—3.

PRACTICAL ANATOMY.

I. MAKE the dissection required by the written slip placed with your part and leave your dissection fastened to the table by tacks and string in such a way as to shew it to the greatest advantage. Place pointers beneath those structures which you wish to make especially prominent. Pin numbers upon all the structures which you expose and leave a written key to the numbers.

II. Determine the cranial indices of any two of the skulls upon the table. State the group of races to which each probably belongs.

MONDAY, *June* 9, 1884. 10 A.M.

GEOLOGY (PRACTICAL).

I. *Questions for written Answers.*

1. DESCRIBE in full detail the genera 1, 2, 3, 4. Give the name and geological range of each.

2. State the characters which are of generic importance (and those only) in the following specimens respectively, 5, 6, 7, 8, 9.

3. Give a description of 10, and refer it to its zoological position, stating your reasons.

4. Name the rock specimens 11, 12, 13, 14, giving the characters by which you identify each one.

5. Describe the microscopic sections 15, 16.

6. Give a short description of the district represented on the map placed before you, noting its geographical and geological features as far only as they can be gathered from the details on the map, and draw a section along the line indicated.

II. *Oral examination.*

MONDAY, *June* 9, 1884. 10—1.

ZOOLOGY (PRACTICAL).

REFER the specimens A—F to their proper zoological positions. Make and briefly describe dissections or other preparations to illustrate and justify your determinations.

MONDAY, *June* 9, 1884. 2—5.

ZOOLOGY (PRACTICAL).

1. IDENTIFY, draw and describe briefly the specimens A—F.

2. Describe briefly the chief points of morphological importance in the specimens G—M.

3. Vivâ voce.

MATHEMATICAL TRIPOS.

PART I.

MONDAY, *May* 26, 1884. 9 to 12.

1. THE opposite sides and angles of a parallelogram are equal to one another, and the diameter bisects the parallelogram, that is, divides it into two equal parts.

A rhombus is circumscribed to a rectangle. Prove that its centre coincides with that of the rectangle and that each of its angles lies either on a fixed straight line or on a fixed circle.

ii. Divide a given line so that the rectangle under the whole line and one part may equal the square on the other part.

If there is drawn to touch the line AB at the point A a circle whose centre is C and whose diameter AD is equal to AB, and if BC meets the circle in E and F, and DE and DF produced meet AB in H and K, then shall the rectangle AB, BH be equal to the square on AH and the rectangle AB, BK to the square on AK.

iii. From a given point outside a given circle draw a tangent to the circle.

A circle whose centre is O touches a given line AB at the point B. Find a point C on its circumference such that the perpendicular from B on OC is bisected by AC.

4. Describe a circle about a given triangle.

On the sides BC, CA, AB of a triangle any points α, β, γ are taken. Prove that the centres of the circles circumscribing $\beta A\gamma$, $\gamma B\alpha$, $\alpha C\beta$ are the angular points of a triangle equiangular with ABC.

5. If two triangles are equiangular the sides about their equal angles are proportional.

A triangle is made to rotate about a point O in its plane through any angle, and P, Q, R are the points in which the old position of each side intersects its new position. Shew that the triangle PQR is similar to the original triangle if O be the centre of the circumscribing circle of the latter, and not otherwise.

vi. From a point above a given plane draw a line perpendicular to the plane.

If $ABCD$ is a regular tetrahedron and O its centre, shew that the radii of the spheres $ABCD$ and $OBCD$ are in the ratio of 2 to 3.

7. The tangents at two points P, Q of a parabola intersect in T, and are met by a third tangent in p, q. Shew that $Pp \,.\, Qq = Tp \,.\, Tq$.

The tangent at a variable point P on a parabola meets the tangent at a fixed point Q in T and PT is divided in a fixed ratio in R. Prove that the locus of R is a parabola touching the given parabola at Q, and of the same magnitude whatever the position of Q on the curve may be.

viii. Shew that the locus of the foot of the perpendicular from a focus on any tangent to a central conic is a circle, which in the case of a parabola degenerates into a straight line.

A circle is drawn on a sheet of paper and the paper is folded so that one corner of the sheet lies on the circumference of the circle. Prove that as this corner moves about on the circle the crease in the paper will envelope a conic.

9. The normal at a point P of an ellipse meets the axes in G, G'. Prove that the rectangle $PG \,.\, PG'$ is equal to the square on the semi-diameter perpendicular to PGG'.

Shew that if CK is the perpendicular from the centre C on the tangent at P, O the middle point of CG and O' the middle point of CG', then will $OB = OK = OP$, and $O'A = O'K = O'P$.

10. The tangents at Q, Q' to an ellipse, centre C, intersect in T, and CT meets the curve in P and QQ' in V. Shew that $QV = Q'V$, and $CV \,.\, CT = CP^2$.

If a parabola is drawn with K for focus (see question 9) to touch the axes of the ellipse, the tangents to this curve from P', where PP' is a double ordinate to either axis, pass through the ends of the other axis.

xi. Prove that the locus of the middle points of a system of parallel chords of a hyperbola is a straight line.

From a point T on a common diameter AB of two concentric conics, tangents TP, TP' are drawn, one to each conic; and PN is an ordinate of the diameter AB with regard to the conic APB. Shew that the triangle PNP' is of the same shape for all positions of T.

xii. Shew that if the polar of a point A with regard to a conic passes through B the polar of B will pass through A.

From D, the middle point of AB, a tangent DP is drawn to the conic. Shew that if CQ, CR are the semi-diameters parallel to AB and DP,

$$AB : CQ = 2DP : CR.$$

MONDAY, *May* 26, 1884. $1\frac{1}{2}$ to $4\frac{1}{2}$.

1. VERIFY, by actual calculation, to eight decimal places correct, the identity

$$\left(1+\frac{1}{2!}+\frac{1}{4!}+\ldots\right)^2-\left(1+\frac{1}{3!}+\frac{1}{5!}+\ldots\right)^2=1.$$

2. Prove that if $\phi(x)$ is a rational and integral function of x which vanishes when x is put equal to a then $x-a$ is a factor of $\phi(x)$.

Establish the identities:

(i) $(x-y)^2(2x+y)^2(2y+x)^2+27x^2y^2(x+y)^2=4(x^2+xy+y^2)^3$,

(ii) $\{x^5(x+2y)+(x-y)(x+y)^5\}\{2y(x+y)-x^2\}-\{y^5(y+2x)+(y-x)(y+x)^5\}\{2x(y+x)-y^2\}$
$=4xy(x+y)(x-y)(2x+y)(x+2y)(x^2+xy+y^2)$.

3. Shew how to find the least number of terms of a Geometrical Progression, of which the first term and the common ratio are given, whose sum exceeds a given quantity. In what case is the solution impossible?

If $(\alpha, \beta, \gamma \ldots)$ is written for the continued product of all the differences of the quantities $\alpha, \beta, \gamma\ldots$ taken in pairs, shew that (if the signs of such expressions are properly chosen) the sum of the homogeneous products of n dimensions of four quantities a, b, c, d is

$$\frac{a^{n+3}(b, c, d)+b^{n+3}(c, d, a)+c^{n+3}(d, a, b)+d^{n+3}(a, b, c)}{(a, b, c, d)};$$

and generalize this theorem for the case of m quantities.

4. Solve the equations:

(i) $kx^4+2x^3+5x^2+4x+1=0$.

(ii) $$\left.\begin{aligned}\frac{x^2}{a-y}+\frac{y^2}{a-x}&=a\\ \frac{x}{a^2-y^2}+\frac{y}{a^2-x^2}&=\frac{1}{a}\end{aligned}\right\}.$$

5. State the values of u_n the sum of the squares, and v_n the sum of the cubes, of the first n natural numbers.

A key-board has $2s$ white keys. Shew that, if no interval greater than an sth is permitted between consecutive notes of a tune, the number of tunes of three notes each which can be played on the white keys is $2(u_{2s-1}-u_{s-1})$, and the number of tunes of four notes each is $2(v_{2s-1}-v_{s-1})-\frac{1}{12}(s-1)s(s+1)(3s-2)$.

[An sth is the interval between the notes given by the extreme keys of a series of s adjacent white keys.]

6. Determine the number of permutations of n things taken r together, each of which includes a particular thing.

Find the chance that in a hand of whist each of the players should have one card at least of each suit.

vii. Find an expression for all the angles which have the same secant.

Solve the equation:

$$6\cos 3\theta - 3\sin 3\theta - 10\cos 2\theta + 5\sin 2\theta + 22\cos\theta - 5\sin\theta = 10.$$

viii. Prove the formulæ:

(i) $\tan A + \tan B + \tan C = \tan A \tan B \tan C$, if $A + B + C = 180°$.

(ii) $\cos^4\frac{\pi}{9} + \cos^4\frac{2\pi}{9} + \cos^4\frac{3\pi}{9} + \cos^4\frac{4\pi}{9} = \frac{19}{16}$.

(iii) $\sec^4\frac{\pi}{9} + \sec^4\frac{2\pi}{9} + \sec^4\frac{3\pi}{9} + \sec^4\frac{4\pi}{9} = 1120$.

ix. Prove that if θ is the circular measure of an angle less than a right angle, $\sin\theta$ lies between θ and $\theta - \frac{\theta^3}{6}$.

Three vertical posts are placed at intervals of one mile along a straight canal each rising to the same height above the surface of the water. The visual line joining the tops of the two extreme posts cuts the middle post at a point eight inches below the top. Find to the nearest mile the radius of the earth.

x. Prove that, in any triangle, $a^2 = b^2 + c^2 - 2bc\cos A$.

If the lines bisecting the angles of a triangle ABC meet the opposite sides in D, E, F, prove that the area of the triangle DEF is

$$2r^2\cos\frac{A}{2}\cos\frac{B}{2}\cos\frac{C}{2} \div \cos\frac{B-C}{2}\cos\frac{C-A}{2}\cos\frac{A-B}{2},$$

and that

$$(a+b)^2(a+c)^2 EF^2 + (b+c)^2(b+a)^2 FD^2 + (c+a)^2(c+b)^2 DE^2 = 16\Delta^2 R(11R + 2r),$$

where Δ is the area of the triangle ABC and R, r are the radii of its circumscribed and inscribed circles.

xi. Given the mean side of a triangle whose sides are in arithmetical progression, and the angle opposite to it, investigate formulæ for solving the triangle, and find the greatest possible value of the given angle.

Solve the triangle when the mean side is 542 feet, and the opposite angle 59° 59′ 59″.

xii. O is the centre of the circumscribed circle of a triangle, K is the orthocentre, and OK meets the circumscribed circle in P and P', and the pedal lines of P and P' in Q and Q'. Prove that

$$OQ \cdot OQ' = 2R^2\cos A\cos B\cos C,$$

where R is the radius of the circumscribed circle.

TUESDAY, *May* 27, 1884. 9 to 12.

1. STATE Newton's laws of motion and prove the parallelogram of forces.

Compare in terms of the sides of a triangle ABC the forces which acting from O, the centre of the inscribed circle, along OA, OB, OC will balance.

2. Define the centre of gravity of a body and state what are the usual assumptions made in defining it. What are centrobaric bodies?

Find the centre of gravity of a spherical surface over which the density at any point varies as the nth power of the distance from a fixed point on the surface.

3. Find the ratio of the power to the weight in that system of pulleys in which the same cord passes round all the pulleys.

On account of the rigidity of the cord and the friction of the axle it is found that a weight of P lbs. requires $aP + Q$ lbs. to lift it by a cord passing over one pulley. Prove that when there are n parallel cords in the above system a power P can support a weight

$$W = a\frac{a^n - 1}{a - 1}P + \frac{a(a^n - 1) - n(a - 1)}{(a - 1)^2}Q,$$

and find the additional weight required to be added to P to raise W.

4. Prove that two couples in the same plane will balance if their moments are equal and opposite.

A number n of equal smooth spheres of weight W and radius r are placed within a hollow vertical cylinder of radius a, less than $2r$, open at both ends and resting on a horizontal plane. Prove that the least value of the weight W' of the cylinder in order that it may not be upset by the balls is given by

$$aW' = (n - 1)(a - r)W \text{ or } aW' = n(a - r)W,$$

according as n is odd or even.

5. State the laws of friction and explain how to verify them experimentally.

If one cord of a sash window breaks, find the coefficient of friction of the sash in order that the other weight may still support the window.

6. Define Work, and shew that the work done in lifting any number of weights is equal to the work done in lifting a weight equal to the sum of their weights through the same vertical height that their centre of gravity has been raised.

Prove that the work done in drawing a weight from one fixed point to another along a rough curve by a force which always acts tangentially will, with certain restrictions, be the same whatever be the shape of the curve.

vii. Find the range on a horizontal plane of a shot for a given angle of elevation and initial velocity; and shew that the height of the vertex in feet is approximately four times the square of the time of flight in seconds.

Prove that projected on a vertical target the shot as seen from the point of projection will appear to descend with constant velocity.

viii. Find the acceleration of a body sliding up or down a rough inclined plane; and prove that the velocity at any point will be that due to falling freely under gravity from a certain straight line, which slopes downwards in the direction of motion at the angle of friction.

Prove that the loss of time in going from A to C, two points on a railway at the same level 8 miles apart, due to an incline of 1 in 100 from A up to B, and an incline of 1 in 300 from B down to C, instead of going on a level line from A to C at a uniform velocity of 45 miles an hour, is about 2 minutes 20 seconds.

It is supposed that with full steam on the velocity drops from 45 miles an hour at A to 15 at the summit B, and that in descending the incline from B to C full steam is still kept on till the velocity has again reached 45 miles an hour, after which the velocity is kept uniform by partly shutting off steam; and prove that this happens at a point Q distant from B about 1 mile 892 yards.

ix. Prove that a train of W tons going up an incline of 1 in m will acquire velocity $\left(\frac{P}{W}-\frac{1}{m}-\frac{\mu}{2240}\right)gt$, and energy $\frac{1}{2}W\left(\frac{P}{W}-\frac{1}{m}-\frac{\mu}{2240}\right)^2 gt^2$ foot-tons, in $\frac{1}{2}\left(\frac{P}{W}-\frac{1}{m}-\frac{\mu}{2240}\right)gt^2$ feet, after t seconds from rest, if P denotes the pull of the engine in tons, and μ the resistances in lbs. per ton.

Prove that in question viii. the pull of the engine from A to Q is $2\frac{5}{48}$ tons and from Q to C is $\frac{7}{12}$ of a ton, supposing $W=200$, $\mu=14$, $g=32$; and find the extra expenditure of work due to the inclines.

x. If a body attached at its centre of mass to one end of a string of length r, the other end of which is attached to a fixed point on a smooth horizontal plane, makes n revolutions a second, the tension of the string is to the pressure on the plane as $4\pi^2n^2r$ to g.

Prove that, if a train is running round a curve of radius r with velocity v, the weight of a carriage is divided between the outer and inner rail in the ratio of $gra+v^2h$ to $gra-v^2h$, where h is the height of the centre of gravity of the carriage above the rails, and $2a$ the distance between them.

xi. Calculate the velocities after direct impact of two elastic spheres.

An inelastic pile of w lbs. is driven vertically a feet into the ground by n blows of a hammer of W lbs. falling h feet. Prove that $\frac{nW^2}{W+w}\frac{h}{a}$ lbs. superposed on the pile in addition to W would drive it down very slowly, supposing the resistance uniform.

If the pile is crushed x feet by each blow, where x is small, the mean pressure exerted by the hammer is $\frac{Ww}{W+w}\frac{h}{x}$ lbs., and each blow lasts for $\frac{x}{h}$ of the time of falling of the hammer, neglecting forces not due to the impulse.

xii. Find the time of complete oscillation in the cycloidal pendulum, and also the time of describing any portion of the arc of oscillation.

Prove that the time a train if unresisted takes to pass through a tunnel under a river in the form of an arc of an inverted cycloid of length $2s$ and height h, cut off by a horizontal line, is

$$\frac{s}{\sqrt{(2gh)}}\cos^{-1}\left(\frac{v^2-2gh}{v^2+2gh}\right),$$

where v is the velocity with which the train enters and leaves the tunnel.

TUESDAY, *May* 27, 1884. $1\frac{1}{2}$ to $4\frac{1}{2}$.

1. IN a fluid at rest under gravity the surfaces of equal pressure are horizontal planes, and in a homogeneous fluid the pressure increases uniformly with the depth.

Prove that if the density varies as the square root of the pressure, the density increases uniformly with the depth.

2. The heights above their horizontal surface of contact of two columns of liquid in equilibrium are in the inverse ratio of their densities.

Prove that the mass of the atmosphere is approximately equal to that of an ocean of mercury covering the earth, and of depth equal to the mean height of the barometer, and that this mass is $5{\cdot}3 \times 10^{15}$ tons, the density of mercury being 13·6.

3. The resultant force exerted by water a feet deep on every foot length of a vertical reservoir wall is $w\,(ah + \frac{1}{2}a^2)$, acting at a height $\frac{1}{3}a\,(a+3h)/(a+2h)$ from the base; where w is the weight of a cubic foot of water and h the head of water corresponding to the atmospheric pressure.

If the water is replaced by lead shot, composed of equal smooth spheres, closely arranged in horizontal layers and heaped up regularly so that the upper surface of the shot is at a height h above the top of the wall, the average resultant force on every foot length of the wall will be $\frac{1}{4}w\,(ah + \frac{1}{2}a^2)$, where w is the weight of a cubic foot of shot. Compare this with the pressure exerted by melted lead.

4. Find the resultant vertical and horizontal pressures on a given portion of a surface exposed to the pressure of a fluid at rest under gravity.

An oblique cylinder standing on a horizontal plane, the generating lines making an angle α with the vertical, is filled to a height h with a weight W of liquid. Prove that the resultant pressure on the curved surface of the cylinder is equivalent to a couple of moment $\frac{1}{2}Wh \tan\alpha$, tending to upset the cylinder.

5. State and prove the conditions of equilibrium of a floating ship; and explain generally how the stability is determined.

In H. M. S. Achilles, a ship of 9000 tons displacement, it was found that moving 20 tons from one side of the deck to the other, a distance of 42 feet, caused the bob of a pendulum 20 feet long to move through 10 inches. Prove that the metacentric height was 2·24 feet.

6. Describe and explain the action of the siphon, and if it is employed to draw off mercury, explain how the action is dependent on the height of the barometer.

Prove that in a siphon the velocity of efflux from a vessel of unlimited extent tends to a finite limit independent of the density of the liquid.

vii. State the laws of the reflexion and refraction of light.

A shell of glass whose surfaces are concentric spheres is filled with mercury. Shew that the magnification of the mercury is equal to the coefficient of refraction of the glass, provided the magnified image is not greater than the external sphere; and explain why a barometer tube appears composed of solid mercury, while a thermometer tube does not.

viii. A luminous point is placed between two parallel plane mirrors. Find the positions of the images produced by successive reflexions at the mirrors.

Explain why, in looking down the axis of a smooth gun barrel with the eye close to one end, a series of dark rings, images of the other end of the barrel, are seen on the surface, at distances from the eye equal to $\frac{1}{3}$, $\frac{1}{5}$, $\frac{1}{7}$,... of the length of the barrel.

ix. Shew that rays of light proceeding from a point become after refraction at a plane surface normals to a conic.

A beam of light from the sun is admitted through a circular hole in a shutter into a dark room, and is incident on the surface of a tank of water whose base is not horizontal. If the bright patch on the base is a circle, find the inclination of the base to the horizon in terms of the sun's altitude.

x. Define the principal points and the foci of a thick lens; and shew that the distance from each focus to the corresponding principal point is the same.

Shew that the image of an arc of a conic whose focus is at one principal point is an arc of a conic whose focus is at the other.

xi. Find the deviation of a ray of light refracted through a prism in a principal plane, and determine the condition that this deviation should be minimum.

Two prisms of refractive indices μ, ν and angles α, β are placed with faces in contact, edges parallel and angles in opposite directions. Find equations to determine the angle of incidence when there is no deviation; and in this case, writing $2\mu^2 - 1 = m$, $2\nu^2 - 1 = n$, shew that if

$$m \sin^2 \alpha + n \sin^2 \beta = \sin^2 (\alpha - \beta),$$

the angles of incidence and emergence are $x + \alpha$ and $x + \beta$ respectively, where

$$m \cos 2 (x + \beta) + n \cos 2 (x + \alpha) = \sin^2 (\alpha - \beta) - mn.$$

xii. Determine the angular radius of the field of view of an astronomical telescope in terms of the breadths and focal lengths of the objective and eye-piece.

A telescope of angular aperture 2β is fixed at an inclination α to the horizon, and a large prism of angle 2ϵ with its edge horizontal and perpendicular to the axis of the telescope is rotated slowly round its edge, which is downwards, before the object glass. The altitude of the sun, supposed in the same vertical plane with the axis of the telescope, being γ and its diameter 2δ, within what limits of inclination of the prism will some portion of the sun be seen in the telescope?

WEDNESDAY, *May* 28, 1884. 9 to 12.

1. P is a point in the side CD of a square $ABCD$ such that AP is equal to the sum of PC and CB, and Q is the middle point of CD. Prove that the angle BAP is twice the angle QAD.

ii. Construct geometrically a triangle having given the distance between the orthocentre and the centre of the circumscribing circle, the magnitude of one angle, and the ratio of the segments into which one adjacent side is divided by the perpendicular from the opposite angle.

3. If X, Y, Z are three points on the sides of a triangle ABC such that AX, BY, CZ meet in a point, and X', Y', Z' are the points where AD, BE, CF intersect EF, FD, DE respectively, D, E, F being three points on the sides such that AD, BE, CF meet in a point, prove that XX', YY', ZZ' also meet in a point.

iv. Two sums, amounting together to £30, are such that, when written down in pounds, shillings and pence, the digits expressing the one are those expressing the other written backwards. Find the sums.

5. A machine whose original value is A pounds will last for m years if B pounds is laid by at the commencement of each year for its repair, while if left unrepaired it will only last n years. Compare the expenses of keeping up a machine for ever on these two plans, and supposing the rate of interest small, shew that they will be the same if $\frac{1}{n}-\frac{1}{m}=\frac{B}{A}$.

vi. A tower AB stands on a horizontal plane and supports a spire BC. An observer at a place E on a mountain whose side may be treated as an inclined plane observes that AB, BC each subtend an angle α at his eye: he then moves to a place F, measuring the distance $EF\,(=2a)$ and observes that AB, BC again subtend angles α at his eye: he then measures the angle $AFE\,(=\beta)$ and $CFE\,(=\gamma)$: shew that if x and y are the heights of AB, BC respectively,

$$x\cos\beta=y\cos\gamma=a\sqrt{\left(1-\frac{\cos\beta\cos\gamma\cos^2\alpha}{\cos^2\frac{\beta+\gamma}{2}\cos^2\frac{\beta-\gamma}{2}}\right)}.$$

Also if G is the middle point of EF and H is the point on the line of greatest slope through G at which AB, BC each subtend an angle δ and GH is measured $(=b)$, prove that the inclination θ of the mountain to the horizon is given by

$$\sqrt{\left\{\frac{x^2y^2}{(x-y)^2}-\left(\frac{a^2+b^2}{2b}\right)^2\right\}}.\sin\theta+\frac{a^2+b^2}{2b}\cos\theta=\frac{xy\,(x+y)\sin 2\delta}{x^2+y^2-2xy\cos 2\delta}.$$

vii. From any point P on an ellipse PN is drawn perpendicular to the major axis to meet the circle described on the major axis in p, p' and Pn is drawn perpendicular to the minor axis to meet the circle described on this axis in q, q'. Prove that pq, $p'q'$ both pass through the centre C, and that if pq', $p'q$ meet CP in R and R' the loci of R and R' are ellipses similar and similarly situated to the given ellipse.

viii. A triangle formed of three rods is placed horizontally, and a homogeneous sphere rests on it. Prove that the pressure on each rod is proportional to its length.

9. A uniform rod, length c and weight w, is suspended from a fixed point by two equal elastic strings, the natural length of each being c and the modulus w. A particle of weight w is placed on the rod at a distance x from its middle point, and when the system is in equilibrium the rod makes an angle α with the vertical. If θ, ϕ are the angles the strings make with the vertical, prove that

$$\frac{x}{c} = \frac{\sin(\theta \sim \phi) - 2\cot\alpha\ \sin\theta\sin\phi}{\sin(\theta+\phi)} = \frac{\sin\theta \sim \sin\phi}{\sin\alpha},$$

and obtain another equation connecting θ and ϕ.

10. AB, BC, CD, DE are four light rods in a vertical plane, jointed at B, C, D and also at a fixed point O, the middle point of AB and DE. OB, BC, CD, DO are all equal, and four equal particles are placed at A, B, D, E. A uniform chain is attached to C and hangs over a small pulley G vertically above O, the length of the chain being twice OG. The system is now made to rotate round the line OCG. Prove that if the angular velocity is such that the chain will hold it in relative equilibrium in one position it will hold it in relative equilibrium in any position.

11. A hollow elliptic cylinder is placed on a horizontal plane with its axis vertical. From the focus of a horizontal section a perfectly elastic particle is projected with velocity v in a horizontal direction. Prove that if the particle returns to the point of projection the height of the section above the table is

$$2m^2ga^2/n^2v^2,$$

where m and n are any integers and $2a$ the major axis of the section.

xii. A particle of mass m is projected from a point P with velocity V and moves under a force to a fixed point S varying inversely as the square of the distance. PP' is the chord through the other focus of the path. When the particle reaches P' the kinetic energy is increased by $\frac{1}{2}\frac{mV^2R}{4a-R}$ by a tangential impulse, R being the distance SP and $2a$ the major axis of the orbit. Prove that the new path of the particle will be independent of the direction of projection.

xiii. A portion of a homogeneous elliptic cylinder, the eccentricity of a right section of which is $\frac{1}{2}$, is bounded by one of the planes through the latera recta of the right section, and floats in homogeneous liquid with its axis in the surface and no part of the bounding plane immersed. Shew (i) that the density of the liquid is to that of the cylinder as $8\pi + 3\sqrt{3} : 6\pi$, (ii) that there are three positions of equilibrium, of which two are stable.

14. An air-tight cubical box is filled partly with water and partly with air so compressed that if there were no water the air would be at atmospheric pressure. A hole being then bored in the base, find the position of the centre of pressure on one of the vertical faces at any time during the emptying.

xv. A ray of light is incident in a principal plane on the base of a triangular prism and emerges at the base after internal reflexion at the other two sides. Prove that the deviation D is least when the angles of incidence and emergence are equal, and that if A is the angle between the sides of the prism and μ the refractive index,

$$\cos\tfrac{1}{2}D = -\mu\cos A.$$

16. In a central solar eclipse, taking the semi-diameters of the sun and moon as seen from the centre of the earth each 16′, the moon's parallax 60′, the sun's parallax 9″, calculate in square miles the areas on the earth over which the eclipse is total and partial respectively at the instant of opposition, and shew that over the latter area the portion of the sun's disc visible varies as $\pi - 2\alpha + \sin 2\alpha$, where $\cos\alpha = 1{\cdot}9\sin$ (☽'s geocentric zenith distance).

WEDNESDAY, *May* 28, 1884. $1\frac{1}{2}$ to $4\frac{1}{2}$.

1. STATE and prove Lemma XI.

POQ is the normal chord of a curve which cuts off the maximum or minimum arc *PQ*. *O* is the centre of curvature at *P*, and *ON* is drawn perpendicular to the tangent at *Q* to meet the perpendicular at *Q* to *PQ* in *N*. Prove that *OP* and *ON* are equal.

2. State and prove Proposition I.

Prove that if a body describes the involute of a circle under a force to the centre, the velocity at any point varies inversely as the angle the direction of motion makes with the normal to the circle at the point where the involute cuts it, and find the law of force.

3. Prove that the force to the pole under which a body describes an equiangular spiral varies inversely as the cube of the distance.

A uniform string is in equilibrium in the form of an equiangular spiral under a repulsive force from the pole. Prove that the force varies as the square of the tension.

4. Find the force to the centre under which a body will describe an ellipse.

A body is describing an ellipse whose eccentricity is $\frac{1}{2}$ under a force to the centre and when it is at one end of a latus rectum the centre of force is suddenly transferred to the foot of the corresponding directrix. Prove that the times which elapse in the two possible cases before the body reaches the major axis are to one another as 2 : 1.

v. Prove that the velocity at any point of a central orbit is that which would be acquired by a body moving from rest under the central force at that point continued constant through one quarter of the chord of curvature drawn through the centre of force; and state the corresponding property for any number of centres.

Given two fixed centres of force varying inversely as the square of the distance and a body placed initially at rest at any point where the forces are equal, the body will oscillate on the arc of a hyperbola if both the forces attract, and on the arc of an ellipse if one force attracts and the other repels.

vi. Given that the centripetal force is inversely proportional to the square of the distance from the centre and that the absolute force of the centre is known, it is required to find the curve which will be described by a body which is projected from a given point with a given velocity in a given direction.

If the velocity of projection from a point on the surface of the earth is such that directed vertically upwards it would carry a body to a height equal to the radius of the earth, then if the direction of projection makes an angle of n degrees with the vertical, the range on the earth's surface will be $120n$ nautical miles.

vii. Define the terms zenith, pole, altitude, latitude, horizon, dip, right ascension, declination, parallax.

Given that a kilometre is the arc of a meridian in latitude 45° which subtends an angle of one centesimal minute at the centre of the earth, that the ellipticity of the surface of the earth is $\frac{1}{295}$, and that the sun's mean equatorial horizontal parallax is 8″.76, prove that the mean distance of the sun is 1.5×10^8 kilometres.

viii. State Kepler's three laws and give the theoretical deductions that can be made from them.

Prove that if the earth is suddenly stopped in its orbit, it will take between $64{\cdot}5\,(1 \pm \frac{3}{2}e)$ days to fall into the sun, e being the eccentricity of the earth's orbit.

ix. Explain generally how the size and density of the earth have been found, and the distance and mass of the sun and moon determined.

Prove that the mass of the sun is 2×10^{27} tons, given that the mean acceleration of gravity on the earth's surface is 9·81 metre-seconds, the mean density of the earth is 5·67, taking a metre cube of water to be a ton and using the data of question vii.

x. Give the cause of aberration, and prove that its effect is to make a star describe a circle similarly to the hodograph of the earth's orbit in a plane parallel to the plane of the ecliptic, which circle projected on the celestial sphere appears an ellipse of eccentricity equal to the cosine of the latitude of the star.

Explain why a meteoric shower may be expected to recur at the same day of the year, and why the meteors appear to radiate from a certain point of the sky. How is the position of this point affected by the motion of the earth?

11. Describe the screw and position micrometer, and explain how the value of a turn of the screw head may be found.

A, B, C are three neighbouring stars of which B and C have the same declination and the difference of the R.A.s of A and B is known. Shew how to determine from observations of these stars the value of a turn of the screw head, the value of the graduations, and the position of the zero of a completely unknown micrometer.

12. Explain the effect of refraction on a star's apparent place, and shew that neglecting the curvature of the earth the refraction varies as the tangent of the zenith distance.

Prove that if the declination of a star is unaffected by refraction the star culminates between the pole and the zenith, and that the azimuth of the star is a maximum at the instant considered.

MATHEMATICAL TRIPOS.

PART II.

THURSDAY, *June* 5, 1884. 9 to 12.

1. ENUNCIATE the principle of Virtual Work, and apply it to establish the six equations of equilibrium of any material system.

A large number of small equal smooth cylinders are arranged closely in horizontal layers between two parallel vertical walls standing on a horizontal plane, so that the upper surface of the cylinders has a common tangent plane inclined at $\frac{1}{3}\pi$ to the horizon. Determine the pressure on the walls after either wall has yielded horizontally to any given extent.

2. Determine by integration the centre of inertia of a material system.

Prove that if the density at any point P of a shell bounded by two excentric spheres is

$$OP^{-4}\,\phi\,(OP/O'P),$$

where O and O' are the limiting points of the spheres, the centre of inertia is at the internal limiting point O, and the shell is centrobaric.

3. Investigate the motion of a simple circular pendulum, and find the time of oscillation through a finite arc.

If while one particle oscillates in a smooth circular tube of diameter $2a$ whose plane is vertical through an arc of height h, another particle circulates in a smooth helical tube described on a cylinder of diameter h whose axis is horizontal, touching the circular tube at the lowest point, with velocity due to a height $2a$ above the lowest point, the two particles can move so as always to be at the same level, provided that the length of one turn of the helix is equal to the circumference of the circular tube.

iv. Investigate the general equations referred to polar co-ordinates of the motion of a particle in space.

A particle describes a rhumb line on a smooth sphere under a force parallel to its axis. Shew that the force varies inversely as the fourth power of the distance from the axis and directly as the distance from the diametral plane perpendicular to the axis.

v. Establish the equation $\frac{d}{d\theta}(\frac{1}{2}I\omega^2) = L$ for a rigid body moving in two dimensions, where L is the moment of the forces, I the moment of inertia of the body about the instantaneous centre and ω, $= d\theta/dt$, the angular velocity.

Two equal cylinders of mass m, bound together by a light elastic band of tension T, roll with their axes horizontal down a rough inclined plane of inclination α. Shew that their acceleration down the plane is

$$\tfrac{1}{2}g \sin\alpha \left(1 - \frac{2\mu T}{mg \sin\alpha}\right),$$

μ being the coefficient of friction between the cylinders.

6. Prove that the effect of forces acting on different bodies of a system in altering the motion of the centre of mass of the system is the same as if all these forces had been applied to a mass equal to the whole mass of the system, and coinciding with its centre of mass; and that the effect of the forces in altering the motion of the system relative to the centre of mass is independent of the motion of the centre of mass.

If a particle is moving in a circular tube placed on a smooth horizontal plane and initially held at rest, prove that when the tube is released its centre will proceed to describe a cycloid.

vii. Explain how to determine the initial accelerations and reactions of a system of bodies instantaneously at rest.

A thin uniform rectangular board hinged along a line in itself parallel to one side is opened out to any angle and placed on a smooth horizontal plane so that the cross section of the board made by a vertical plane perpendicular to the hinge is a triangle ABC, of which the side AB is in the horizontal plane, and the angle C in the hinge. Prove that C moves in a direction making with the vertical an angle whose tangent is

$$\tfrac{1}{2} \tan A \tan B \tan \frac{A-B}{2},$$

and find its initial vertical and horizontal accelerations.

8. Find the position of the metacentres of a ship for rolling and pitching, and prove that for a slight displacement about an axis in the plane of floatation the restoring couple is perpendicular to the axis only when it is a principal axis of the plane of floatation.

If a plane rigid raft is supported in a horizontal position by a number of floating bodies, a weight placed on the raft vertically over the centre of inertia of the planes of floatation will sink the raft vertically, while a weight placed anywhere else will cause the raft to turn about an axis, the antipolar of the point of application of the weight with respect to the momental ellipse of the planes of floatation.

Compare this with the theory of a table resting on a number of elastic supports.

ix. Find the differential equation of the path, assumed plane, described by a ray of light propagated through a medium of variable density.

Shew that if the refractive index of a medium varies as the nth power of the distance from a fixed point, the equation of the path of the ray is

$$r^{n+1} \sin(n+1)\theta = a^{n+1}.$$

THURSDAY, *June* 5, 1884. $1\frac{1}{2}$ to $4\frac{1}{2}$.

1. SHEW how to solve in positive integers the equation $ax+by=c$ where a, b, c are positive integers, and prove that the number of solutions cannot exceed the integer next greater than c/ab.

Shew that the number of independent solutions in unequal positive integers, zero included, of the equation $x+y+z+u=2p$, is the integer nearest to $\frac{1}{36}p^2(2p-3)$.

2. Shew that the series

$$1+\frac{\alpha}{\beta}x+\frac{\alpha.\alpha+1}{\beta.\beta+1}x^2+\frac{\alpha.\alpha+1.\alpha+2}{\beta.\beta+1.\beta+2}x^3+\dots$$

is equal to the continued fraction

$$\frac{1}{1-}\,\frac{a_0x}{1-}\,\frac{a_1x}{1-}\,\frac{a_2x}{1-\dots},$$

where $$a_{2n}=\frac{(\alpha+n)(\beta+n-1)}{(\beta+2n-1)(\beta+2n)} \text{ and } a_{2n+1}=\frac{(n+1)(\beta-\alpha+n)}{(\beta+2n)(\beta+2n+1)}.$$

Prove that

$$1-\frac{\sin\theta}{\theta}=\frac{\frac{1.2}{1.3}\sin^2\frac{\theta}{2}}{1-}\;\frac{\frac{1.2}{3.5}\sin^2\frac{\theta}{2}}{1-}\;\frac{\frac{3.4}{5.7}\sin^2\frac{\theta}{2}}{1-}\;\frac{\frac{3.4}{7.9}\sin^2\frac{\theta}{2}}{1-\dots}$$

3. Obtain the sum of a given power of the roots of a given equation.

Considering the two equations

$$x^4-a_1x^3+a_2x^2-a_3x+a_4=0,$$
$$x^4-4a_1x^3+12a_2x^2-24a_3x+24a_4=0,$$

prove that the sums of the second, the third and the fourth powers of the roots of the former are symmetric functions of the differences of the roots of the latter.

Express $\Sigma\alpha^2\beta^2$ for the roots of the former in terms of the roots of the latter.

iv. Determine completely the relation of the line $ax+by=0$ to the curve

$$(ax+by)^2v_{n-2}+(ax+by)w_{n-2}+u_{n-3}+\dots+u_0=0,$$

where u_r, v_r, w_r are homogeneous functions of x and y of degree r.

Trace the curve $\frac{a^2}{x^2}+\frac{b^2}{y^2}=1$ and determine the form it assumes when a diminishes indefinitely.

5. Find the area of the section of the ellipsoid $\frac{x^2}{a^2}+\frac{y^2}{b^2}+\frac{z^2}{c^2}=1$ by any plane.

Find the equation of the surface of the locus of the middle points of all chords of this ellipsoid whose projections on the axis of x are of constant length $2l$, and shew that its volume is

$$2\pi abc\left(1-\frac{l}{a}\right)\left(1-\frac{l^2}{a^2}\right)E\left(\frac{a-l}{a+l}\right),$$

where $E(k)$ is the complete elliptic integral of the second kind, $\int_0^{\frac{\pi}{2}}(1-k^2\sin^2\theta)^{\frac{1}{2}}\,d\theta$.

6. Solve the differential equations:

$$\text{(i)}\quad x(1-x)^2\frac{d^2y}{dx^2}=2y,$$

$$\text{(ii)}\quad \frac{d^4y}{dx^4}-12\frac{d^2y}{dx^2}+12y=16x^4e^{x^2},$$

and verify that the integral of

$$x(1-x)\frac{d^2y}{dx^2}+\{b-(1+a)x\}\frac{dy}{dx}+(1-a)y=0$$

is

$$y=Cx^{1-b}(1-x)^{b-a}\int_k^x x^{b-2}(1-x)^{a-b-1}\,dx.$$

vii. Prove that the equation of the common catenary is

$$\frac{y}{c}=\cosh\frac{x}{c}.$$

If the line-density of the chain varies as any power of the tension, the vertical chord of curvature at any point varies as the distance of the point from a certain horizontal line.

viii. State and prove the principle of conservation of angular momentum.

An elliptic tube of mass M, latus-rectum $2l$ and eccentricity e, is rotating freely with angular velocity Ω about its major axis which is fixed, and contains a particle of mass m attracted to one focus by a force $\mu m\,(\text{distance})^{-2}$ and initially at rest at the end of the major axis nearest to the centre of force. If the particle be slightly disturbed prove that if $\mu e(1+e)^2<l^3\Omega^2$, it will come to rest relatively to the tube at the end of the nearer latus rectum if

$$\Omega^2=\frac{2\mu me}{l}\left(\frac{1}{ml^2}+\frac{1}{Mk^2}\right),$$

where k is the radius of gyration of the tube about the axis.

ix. A rigid shell in the shape of an ellipsoid of revolution is filled with two homogeneous gravitating liquids of different densities which do not mix, and the whole system is rotating uniformly in relative equilibrium round the axis of the shell. Prove that a possible form of the surface of separation is a spheroid, and find an equation connecting the eccentricity with the angular velocity.

x. Investigate the effect of aberration on the declination and right ascension of a fixed star.

The apparent declination of a fixed star whose mean place coincides with the pole is observed at two successive solstices and half the difference of the declinations taken as the constant of aberration. Shew that if the solar system has a velocity of four miles a second in a direction lying in the plane of the equator and perpendicular to the line of equinoxes, the value of this constant will be about half a second too great.

FRIDAY, *June* 6, 1884. 9 to 12.

1. IF $x = \frac{a_1}{1+}\frac{a_2}{1+}\dots + \frac{a_n}{1+}\frac{a_1}{1+}$ &c. and $y = \frac{a_n}{1+}\frac{a_{n-1}}{1+}\dots + \frac{a_1}{1+}\frac{a_n}{1+}$ &c. prove that $x(1+y) = \frac{p}{q}$, where $\frac{p'}{q'}$ and $\frac{p}{q}$ are the $(n-1)^{\text{th}}$ and n^{th} convergents of x.

ii. Shew that the solution of the equation $\theta = \cos\theta$ in ascending powers of $\frac{\pi}{4}$ is

$$\theta = \frac{\pi}{4} - \tfrac{1}{12}\left(\frac{\pi}{4}\right)^3 - \tfrac{1}{60}\left(\frac{\pi}{4}\right)^5 - \dots.$$

3. A straight line meets one of a system of confocal conics in P, Q, and RS is the line joining the feet of the other two normals drawn from the point of intersection of the normals at P and Q. Prove that the envelope of RS is a parabola touching the axes.

4. A conic is inscribed in a triangle ABC and one of its asymptotes passes through a fixed point. Find the locus of the centre, and prove that if the point coincides with A the locus becomes the sides AB, AC and the straight line joining the middle points of these sides.

5. A helix is drawn on a cylinder, and the surface which has this curve as edge of regression is cut by a concentric cylinder. Prove that the principal radii of curvature of the surface at all points of the curve of section are the same.

vi. Shew that the sum of any two products of pairs of opposite edges of a tetrahedron is greater than the product of the third pair of opposite edges.

vii. If $U \equiv (abcdlmnpqr)(xyzw)^2 = 0$ is the equation of a cone, shew that the co-ordinates of the vertex satisfy the equations

$$\frac{\frac{\partial U}{\partial a}}{\frac{\partial \Delta}{\partial a}} = \frac{\frac{\partial U}{\partial b}}{\frac{\partial \Delta}{\partial b}} = \dots = \frac{\frac{\partial U}{\partial l}}{\frac{\partial \Delta}{\partial l}} = \dots$$

where Δ is the discriminant.

viii. Shew that if α is positive and less than π

$$\int_0^\infty \log \frac{(1+\sin\alpha\sin\theta)^{1-\sin\alpha\sin\theta}}{(1-\sin\alpha\sin\theta)^{1+\sin\alpha\sin\theta}} \cdot \frac{d\theta}{\theta} = \pi\left(\alpha - 2\sin\alpha\log\cos\frac{\alpha}{2}\right).$$

9. A homogeneous ellipsoid of density ρ and semi-axes a, b, c contains a concentric spherical cavity of radius r. Prove that the work done in filling the cavity with matter of the same density as the ellipsoid brought from an infinite distance is

$$\tfrac{8}{45}\pi^2\rho^2 r^3 \left\{5abc\int_0^\infty \frac{d\lambda}{\sqrt{(a^2+\lambda)(b^2+\lambda)(c^2+\lambda)}} - 12r^2\right\}.$$

x. In uniplanar motion of a lamina there is always one point of which the acceleration is zero. If any circle is drawn through this point, prove that the accelerations of all points on this circle are directed to a common point.

xi. Prove that the length of the simple equivalent pendulum for small oscillations of the handle of a garden roller which is rolling along a horizontal walk is

$$l - \frac{h}{1 + \frac{M}{m}\left(1 + \frac{k^2}{a^2}\right)},$$

where a is the radius of the roller, M is the mass of the roller alone, Mk^2 its moment of inertia about the axis, m the mass of the handle, h the distance of the centre of gravity of the handle from the axis of the roller and l the length of the simple equivalent pendulum of the handle.

xii. A uniform circular disc is moving in any manner under no forces on a smooth horizontal plane, and is suddenly divided along a diameter. Determine the subsequent motion of the two halves, supposing them grooved together.

13. A heterogeneous cylinder is initially at rest with the plane through its axis and its centre of gravity perpendicular to a plane inclined to the horizon at an angle α down which it then rolls with its axis horizontal. Prove that the pressure on the plane will vanish when the cylinder has made a quarter of a revolution if

$$\tan\alpha = \frac{(a^2 + k^2)(a^2 + k^2 + c^2) + 2ac^3}{\pi a^2 c^2 - 2ac^3 - ac(a^2 + k^2 + c^2)},$$

where a is the radius of the cylinder, k its radius of gyration about an axis through the centre of gravity parallel to the axis and c the distance between the centre of gravity and the axis.

Determine also whether the cylinder will leave the plane.

xiv. A smooth vertical screw with flat ends is placed on a smooth horizontal table, and a nut on the screw descends from rest under gravity. Investigate the motion, and examine what ensues when the nut impinges on the table.

15. A solid homogeneous cone with an elliptic base floats in homogeneous fluid with its longest generator horizontal and immersed in the fluid and the centre of the base in the surface. If a is the length of the horizontal generator and h the height of the highest point above it prove that the line of action of the resultant fluid pressure on the curved surface cuts the vertical through the centre of gravity of the cone at a depth $(3\pi + 16)(4a^2 + 25h^2)/800h$ below the highest point, and find the magnitude of this pressure.

16. Prove that the power of a solid transparent spherical shell whose bounding radii are $\frac{1}{3}a\sqrt{3}$ and a and in which the index of refraction at a distance r from the centre is $1 + r^2/a^2$, is $\pi/6a$.

17. Give a geometrical construction for the path to be followed for great circle sailing between two ports on a chart in the stereographic projection, the plane of the equator being the plane of projection. If the ports have the same latitude, find the course to be steered at every point, and shew how a table may be constructed for two given ports which will give the course by a simple interpolation, when the error of the chronometer on Greenwich time is known.

FRIDAY, *June* 6, 1884. $1\frac{1}{2}$ to $4\frac{1}{2}$.

1. PROVE that $n!$ divides the product of any n consecutive integers.

The greatest coefficient in the expansion of $(1+x)^{n+1}$ is divisible by n^2-1 if n is of either of the forms $6m$ or $6m+2$ but not otherwise.

ii. Prove that, if $(1+m)\tan\theta=(1-m)\tan\phi$, where θ and ϕ are positive angles less than $\frac{1}{2}\pi$, then will

$$\theta=\phi-m\sin 2\phi+\tfrac{1}{2}m^2\sin 4\phi-\ldots$$

Shew that

$$\tfrac{1}{2}\tan^{-1}(\sin\alpha\tan 2\beta)=\sin\alpha\tan\beta+\tfrac{1}{3}\sin 3\alpha\tan^3\beta+\ldots$$

3. If p and q are unequal prime numbers, and if r denotes a root of the equation

$$x^{p-1}+x^{p-2}+\ldots+x+1=0,$$

prove that

(i) $$(r-r^{-1})^2(r^2-r^{-2})^2\ldots\{r^{\frac{1}{2}(p-1)}-r^{-\frac{1}{2}(p-1)}\}^2=(-)^{\frac{1}{2}(p-1)}p,$$

(ii) $$\Pi_{k=1}^{k=\frac{1}{2}(p-1)}\frac{r^{kq}-r^{-kq}}{r^k-r^{-k}}=\pm 1.$$

Determine the ambiguous sign in (ii).

iv. In a spherical triangle prove that, E being the spherical excess,

$$\sin(A-\tfrac{1}{2}E):\sin(B-\tfrac{1}{2}E):\sin(C-\tfrac{1}{2}E)=\tan\tfrac{1}{2}a:\tan\tfrac{1}{2}b:\tan\tfrac{1}{2}c.$$

If k is the radius of the circle to which the triangle is self-conjugate, prove that

$$\tan^2 k=n^2\cos A\cos B\cos C\div\cos a\cos b\cos c,$$

where $$n^2=\sin s\sin(s-a)\sin(s-b)\sin(s-c).$$

v. Shew that the locus of the middle points of a system of parallel chords of the conic $ax^2+2hxy+by^2+2gx+2fy+c=0$ is a straight line.

The locus of the intersection of the diameters of two given conics which are conjugate respectively to sets of parallel chords which make with one another a given angle α, is a conic. Also if the axes of the given conics are parallel and 2θ, $2\theta'$ are the angles between their asymptotes the locus reduces to a parabola if

$$2\tan\alpha=\frac{\tan\theta}{\tan\theta'}\sim\frac{\tan\theta'}{\tan\theta}.$$

vi. Prove that the normals at three points on an ellipse whose excentric angles are α, β, γ meet in a point if $\sin(\beta+\gamma)+\sin(\gamma+\alpha)+\sin(\alpha+\beta)=0$.

If the normals at two points on the ellipse $x^2/a^2+y^2/b^2=1$ meet on the curve, prove that the tangents at these points meet on

$$\left(\frac{x^2}{a^2}+\frac{y^2}{b^2}\right)^2=\frac{(a^2-b^2)^2}{a^4b^4}\left\{(a^2-x^2)^2\frac{y^2}{b^2}+(b^2-y^2)^2\frac{x^2}{a^2}\right\}.$$

7. Shew how to find the envelope of a system of plane curves whose equation involves a single variable parameter, and prove that it touches all the intersecting members of the system.

Shew that the envelope of the common chords of the ellipse $x^2/a^2+y^2/b^2=1$ and its circles of curvature is the curve

$$\left(\frac{x}{a}+\frac{y}{b}\right)^{\frac{2}{3}}+\left(\frac{x}{a}-\frac{y}{b}\right)^{\frac{2}{3}}=2.$$

Trace this curve and prove that its area is half as great again as that of the ellipse.

8. Prove $$\iiint\ldots V\,dx_1\,dx_2\ldots dx_n=\iiint\ldots V'\,\frac{d(x_1,x_2\ldots x_n)}{d(u_1,u_2\ldots u_n)}\,du_1\,du_2\ldots du_n,$$

where V, u_1, $u_2\ldots u_n$ are functions of x_1, $x_2\ldots x_n$ and V' is V expressed in terms of u_1, $u_2\ldots u_n$.

Shew that $$\iiint\ldots\sqrt{\Delta}\,dx_1\,dx_2\ldots dx_n=\frac{a^{\frac{n}{r}}}{nr^{n-1}}\,\frac{\left\{\Gamma\left(\frac{1}{r}\right)\right\}^n}{\Gamma\left(\frac{n}{r}\right)},$$

where x_1, $x_2,\ldots x_n$ are the roots and Δ the discriminant of the equation

$$x^n+p_1x^{n-1}+\ldots+p_{n-1}x+p_n=0,$$

the integral being taken over all values of the variables such that the sum of the rth powers of the coefficients in this equation, which are all positive, does not exceed a given quantity a.

ix. If the normals drawn at the points where a straight line meets a quadric intersect, those drawn at the points where the same line meets any confocal quadric also intersect.

Shew that from any external point four lines can be drawn to touch lines of curvature on a given quadric.

10. Obtain the complementary function of the equation

$$\frac{d^{2n}y}{dx^{2n}}-a^{2n}y=f(x)$$

in the form

$$y=Ce^{ax}+De^{-ax}+\sum_{r=1}^{r=n-1}\exp\left(ax\cos\frac{r\pi}{n}\right)\left\{A_r\cos\left(ax\sin\frac{r\pi}{n}\right)+B_r\sin\left(ax\sin\frac{r\pi}{n}\right)\right\},$$

and shew that the part of the particular integral corresponding to the typical terms under the summation sign is

$$\frac{1}{na^{2n-1}}\int^x\exp\left\{a(x-\xi)\cos\frac{r\pi}{n}\right\}.\cos\left\{\frac{r\pi}{n}+a(x-\xi)\sin\frac{r\pi}{n}\right\}f(\xi)\,d\xi.$$

SATURDAY, *June* 7, 1884. 9 to 12.

1. FIND the sum of n terms of each of the two series whose n^{th} terms are the products of the terms from the nth to the $(n+m)^{\text{th}}$ inclusive of (i) an arithmetical, (ii) a harmonical series.

Demonstrate the identity

$$\frac{1}{r!}+\frac{n.n-1}{2^2.1!(r+1)!}+\frac{n.n-1.n-2.n-3}{2^4.2!(r+2)!}+\dots\equiv\frac{(2n+2r)!}{2^n(n+r)!(n+2r)!},$$

where n is a positive integer.

ii. Denoting the tangents of half the sides of a spherical triangle by x, y, z and the tangents of half the angles by X, Y, Z, establish Napier's analogies in the form

$$X(Y+Z)(1-yz)=(1-YZ)(1+yz),$$
$$X(Y-Z)(y+z)=(1+YZ)(y-z),$$
$$x(1-yz)(1+YZ)=(y+z)(1-YZ),$$
$$x(1+yz)(Y-Z)=(y-z)(Y+Z).$$

Given $\tan\frac{1}{2}a=\frac{1}{5}$, $\tan\frac{1}{2}b=\frac{1}{2}$, $\tan\frac{1}{2}A=\frac{1}{4}$, prove that

$$\sin c=\tfrac{561}{689},\quad \sin B=\tfrac{416}{425},\quad \sin C=\tfrac{264}{265}.$$

iii. Define corresponding points on confocal conics, and prove that the distance between any two points is equal to the distance between the corresponding points.

Find the distance between two points in terms of the elliptic co-ordinates ξ and η, where $x+iy=c\cos(\xi+i\eta)$, and shew that the tangent of the angle between the line joining the points ξ, η and ξ', η' and the line joining the corresponding points ξ', η and ξ, η' is

$$\frac{\sinh(\eta'-\eta)\sin(\xi'-\xi)}{1-\cosh(\eta'-\eta)\cos(\xi'-\xi)}.$$

4. If A, B, C, D are four points on a conic of which S is a focus, shew that, the terms being taken with the proper signs,

$$SA.\Delta BCD+SB.\Delta CDA+SC.\Delta DAB+SD.\Delta ABC=0.$$

Prove also that a linear relation connects the reciprocals of the squares of the perpendiculars from a focus on any four tangents.

v. Find the equations of the tangent plane and the normal line at any point of an ellipsoid.

Prove that the sines of the angles at which a straight line cuts an ellipsoid are proportional to the perpendiculars from the centre on the tangent planes at the points of intersection.

6. Prove that if a family of quadrics have eight fixed points in common they all pass through a fixed curve, and four members of the family are cones.

If the curve has a double point, shew that two of these cones coincide and have their vertex at the double point.

Reconcile this with the fact that all the quadrics of the family touch at the double point.

7. Find the polar equation of the normal at any point of a given curve.

Determine the equation of the circle which touches the curve $r = f(\theta)$ at the point r_1, θ_1 and passes through another point r_2, θ_2 on the curve; and hence derive the expression for the radius of curvature in polar co-ordinates.

viii. Explain the method of inversion and compare the radii of curvature at corresponding points of inverse curves.

Find the radii of curvature of the confocal orthogonal limaçons

$$r \sin^2 \alpha = a (\cos \theta - \cos \alpha),$$
$$r \sinh^2 \beta = a (\cosh \beta - \cos \theta),$$

at a point of intersection, in terms of α and β.

ix. Define the hyperbolic functions $\sinh x$, $\cosh x$ and $\tanh x$; and prove that

(i) $\displaystyle\int_0^x \frac{dx}{\sqrt{(x^2+1)}} = \sinh^{-1} x, \qquad \int_1^x \frac{dx}{\sqrt{(x^2-1)}} = \cosh^{-1} x, \qquad \int_0^x \frac{dx}{1-x^2} = \tanh^{-1} x,$

(ii) $\displaystyle\int_0^x \frac{dx}{1-x^{2n}} = \frac{1}{2n} \sum_{r=0}^{r=n-1} \left(\cos \frac{r\pi}{n} \tanh^{-1} \frac{2x \cos \frac{r\pi}{n}}{1+x^2} + \sin \frac{r\pi}{n} \tan^{-1} \frac{2x \sin \frac{r\pi}{n}}{1-x^2} \right).$

10. Establish, under the necessary limitations, the formulæ

$$\int_b^a \phi(x)\, dx = \int_b^c \phi(x)\, dx + \int_c^a \phi(x)\, dx;$$
$$\int_{-\infty}^{\infty} \left(x + \frac{1}{x}\right) \phi\left(x - \frac{1}{x}\right) \frac{dx}{x} = 2 \int_{-\infty}^{\infty} \phi(x)\, dx.$$

Shew also that

$$\int_0^\infty \frac{\sin x}{x}\, dx = \int_0^\infty \left(\frac{\sin x}{x}\right)^2 dx = \tfrac{4}{3} \int_0^\infty \left(\frac{\sin x}{x}\right)^3 dx = \tfrac{8}{3} \int_0^\infty \left(\frac{\sin x}{x}\right)^4 dx.$$

SATURDAY, *June* 7, 1884. $1\frac{1}{2}$ to $4\frac{1}{2}$.

1. PROVE that any system of forces in space can be reduced to a wrench, that is to a force and a couple whose axis is parallel to the force; and find the general equations of the central axis of a system of forces.

Deduce from statical principles that the equations of the shortest distance between the central axes of the two systems (X, Y, Z, L, M, N) and (X', Y', Z', L', M', N') is given by the equations

$$(L-yZ+zY)(YZ'-ZY')+(M-zX+xZ)(ZX'-XZ')+(N-xY+yX)(XY'-YX')=0,$$

$$(L'-yZ+zY')(YZ'-ZY')+(M'-zX'+xZ')(ZX'-XZ')+(N'-xY'+yX')(XY'-YX')=0.$$

ii. A plane lamina of unit density subtends a solid angle ω at a point P distant z from the plane. Prove that the potential at this point is

$$W-z\omega,$$

where W is the potential of the bounding curve supposed to have at any point Q a density equal to the projection of PQ on the normal at Q.

Prove that the potential of a circular disc of radius a and unit density at a point in its plane distant c from the centre is

$$\int_0^{2\pi} \frac{a^2-ac\cos\theta}{\sqrt{(a^2-2ac\cos\theta+c^2)}}\,d\theta.$$

iii. Investigate the equations of motion of a particle under any forces moving in a plane tube which is rotating in its own plane.

If the tube is in the shape of an equiangular spiral and is rotating uniformly about the pole, to which a force is directed, prove that if the pressure on the curve is always zero, the law of force is $\mu r+\frac{\mu'}{r^3}$.

iv. Prove that, in elliptic motion round the focus, the time is proportional to the area described about the one focus and the Action to the area described about the other.

An oval curve is drawn and its successive pedals with respect to an internal pole formed, and all these are described by particles under central forces to the pole. Prove that the whole Action in each curve is proportional to the rate of describing areas in that curve.

5. Prove that the angular acceleration of a rigid body moveable about a fixed axis is equal to the moment of the forces about the axis divided by the moment of inertia; and extend this theorem to the case of a train of wheelwork, and of a rigid body moveable on a fixed screw under given forces.

Investigate the relation between the centres of suspension and oscillation of a pendulum when the axis of suspension is a horizontal smooth screw of given pitch.

6. Determine the acceleration of a wagon which is running down an incline at an angle α to the horizon, taking into account the inertia of the wheels.

If the road is crushed uniformly by the wheels, the acceleration will be

$$\frac{(M+2m)\sin(\alpha-\beta)}{(M+2m)\cos\beta+2m\dfrac{k^2}{a^2}}g,$$

if the centre of inertia of the body is midway between the axles, M denoting the mass of the body of the wagon, m the mass, mk^2 the moment of inertia and a the radius of each pair of wheels, and β an angle depending on the nature of the road.

vii. Explain what is meant by the surface tension of a liquid, and state the experimental laws to which it is subject.

A capillary tube in the form of a surface of revolution is partly immersed in a fluid with its axis vertical. Find the equation of the generating curve if the fluid is in equilibrium at whatever height it stands in the tube.

8. Deduce the laws of reflexion and refraction of light from Fermat's principle of the minimum time of propagation of light.

A bicycle wheel in which the spokes are perpendicular to the axis is placed in the sun and spun rapidly. Shew that the equation of the bright curve seen on the spokes by an eye in the axis of the wheel produced is of the form

$$r^2(\sec^2\theta\sec^2\alpha-1)=a^2,$$

α denoting the angle between the direction of the sun's rays and the plane of the wheel, and a the distance of the eye from the wheel.

ix. Explain clearly how the parallax of Mars when in opposition may be found by observations made with an equatorial at a single observatory and investigate the necessary formula.

Shew that if the equatorial is in perfect adjustment and is driven by clock-work at such a rate as to allow for the motion of the planet in right ascension, the centre of Mars will, owing to parallax, appear to describe an arc of an ellipse in the field of view, the motion of the planet in declination being neglected.

GENERAL EXAMINATION FOR THE ORDINARY B.A. DEGREE.

MONDAY, *May* 26, 1884. 9—12.

THE ACTS OF THE APOSTLES. (A)

1. SKETCH the position of the Christian Church at the date of St Paul's arrival in Rome (ch. 28). To what extent had it been organised?

2. Give an account of the Council of Jerusalem and the question then decided (ch. 15).

3. What do we learn in this Book of: Theudas—Agabus—Æneas—Lydia—Apollos?

4. Translate:

(*a*) *καθὼς γέγραπται ἐν Βίβλῳ τῶν προφητῶν Μὴ σφάγια καὶ θυσίας προσηνέγκατέ μοι ἔτη τεσσεράκοντα ἐν τῇ ἐρήμῳ, οἶκος Ἰσραήλ; καὶ ἀνελάβετε τὴν σκηνὴν τοῦ Μολὸχ καὶ τὸ ἄστρον τοῦ θεοῦ Ῥομφά, τοὺς τύπους οὓς ἐποιήσατε προσκυνεῖν αὐτοῖς. καὶ μετοικιῶ ὑμᾶς ἐπέκεινα Βαβυλῶνος.*

Who is quoting and from whom?

(*b*) *οἱ δὲ εἶπαν Κορνήλιος ἑκατοντάρχης, ἀνὴρ δίκαιος καὶ φοβούμενος τὸν θεὸν μαρτυρούμενός τε ὑπὸ ὅλου τοῦ ἔθνους τῶν Ἰουδαίων, ἐχρηματίσθη ὑπὸ ἀγγέλου ἁγίου μεταπέμψασθαί σε εἰς τὸν οἶκον αὐτοῦ καὶ ἀκοῦσαι ῥήματα παρὰ σοῦ. εἰσκαλεσάμενος οὖν αὐτοὺς ἐξένισεν.*

ἐχρηματίσθη. What other meanings has this word?

(*c*) *Γνωστὸν οὖν ἔστω ὑμῖν, ἄνδρες ἀδελφοί, ὅτι διὰ τούτου ὑμῖν ἄφεσις ἁμαρτιῶν καταγγέλλεται, καὶ ἀπὸ πάντων ὧν οὐκ ἠδυνήθητε ἐν νόμῳ Μωυσέως δικαιωθῆναι ἐν τούτῳ πᾶς ὁ πιστεύων δικαιοῦται. βλέπετε οὖν μὴ ἐπέλθῃ τὸ εἰρημένον ἐν τοῖς προφήταις Ἴδετε, οἱ καταφρονηταί, καὶ θαυμάσατε καὶ ἀφανίσθητε.*

ἐν τούτῳ πᾶς ὁ πιστεύων δικαιοῦται. Can you give any historical account of the controversy suggested by these words?

(*d*) *Ἄνδρες, ἐπίστασθε ὅτι ἐκ ταύτης τῆς ἐργασίας ἡ εὐπορία ἡμῖν ἐστίν· οὐ μόνον δὲ τοῦτο κινδυνεύει ἡμῖν τὸ μέρος εἰς ἀπελεγμὸν ἐλθεῖν, ἀλλὰ καὶ τὸ τῆς μεγάλης θεᾶς Ἀρτέμιδος ἱερὸν εἰς οὐθὲν λογισθῆναι, μέλλειν τε καὶ καθαιρεῖσθαι τὴν μεγαλειότητα αὐτῆς, ἣν ὅλη ἡ Ἀσία καὶ ἡ οἰκουμένη σέβεται.*

What more do you know about this Temple?

(*e*) *ἵνα δὲ μὴ ἐπὶ πλεῖόν σε ἐγκόπτω, παρακαλῶ ἀκοῦσαί σε ἡμῶν συντόμως τῇ σῇ ἐπιεικίᾳ. εὑρόντες γὰρ τὸν ἄνδρα τοῦτον λοιμὸν καὶ κινοῦντα στάσεις πᾶσι τοῖς Ἰουδαίοις τοῖς κατὰ τὴν οἰκουμένην πρωτοστάτην τε τῆς τῶν Ναζωραίων αἱρέσεως, ὃς καὶ τὸ ἱερὸν ἐπείρασεν βεβηλῶσαι, ὃν καὶ ἐκρατήσαμεν.*

5. Explain: *Ἀσιάρχαι—πνεῦμα Πυθῶνος—ἡ συναγωγὴ τῶν Λιβερτίνων—ἀγοραῖοι ἄγονται καὶ ἀνθύπατοί εἰσιν—παρεμβολή.*

MONDAY, *May* 26, 1884. 9—12.

THE ACTS OF THE APOSTLES. (B)

1. ILLUSTRATE from this Book the policy of Rome towards the Jews both in and out of Judæa.

2. Give instances from this Book of St Paul's wisdom and tact in dealing with his own countrymen and others.

3. What do we learn of Sergius Paulus—John Mark—Tabitha—Bernice—Timotheus?

4. Translate:

(*a*) ἡ σκηνὴ τοῦ μαρτυρίου ἦν τοῖς πατράσιν ἡμῶν ἐν τῇ ἐρήμῳ, καθὼς διετάξατο ὁ λαλῶν τῷ Μωυσῇ ποιῆσαι αὐτὴν κατὰ τὸν τύπον ὃν ἑωράκει, ἣν καὶ εἰσήγαγον διαδεξάμενοι οἱ πατέρες ἡμῶν μετὰ Ἰησοῦ ἐν τῇ κατασχέσει τῶν ἐθνῶν ὧν ἐξῶσεν ὁ θεὸς ἀπὸ προσώπου τῶν πατέρων ἡμῶν ἕως τῶν ἡμερῶν Δαυείδ.

Who is speaking and what is here his argument?

(*b*) ὁ δὲ Πέτρος ἤγειρεν αὐτὸν λέγων Ἀνάστηθι· καὶ ἐγὼ αὐτὸς ἄνθρωπός εἰμι. καὶ συνομιλῶν αὐτῷ εἰσῆλθεν, καὶ εὑρίσκει συνεληλυθότας πολλούς, ἔφη τε πρὸς αὐτούς Ὑμεῖς ἐπίστασθε ὡς ἀθέμιτόν ἐστιν ἀνδρὶ Ἰουδαίῳ κολλᾶσθαι ἢ προσέρχεσθαι ἀλλοφύλῳ.

ἀθέμιτον. Illustrate this word and the sentence generally.

(*c*) Συμεὼν ἐξηγήσατο καθὼς πρῶτον ὁ θεὸς ἐπεσκέψατο λαβεῖν ἐξ ἐθνῶν λαὸν τῷ ὀνόματι αὐτοῦ. καὶ τούτῳ συμφωνοῦσιν οἱ λόγοι τῶν προφητῶν, καθὼς γέγραπται Μετὰ ταῦτα ἀναστρέψω· καὶ ἀνοικοδομήσω τὴν σκηνὴν Δαυεὶδ τὴν πεπτωκυῖαν καὶ τὰ κατεστραμμένα αὐτῆς ἀνοικοδομήσω καὶ ἀνορθώσω αὐτήν.

Give a brief abstract of the speech of which this is a portion.

(*d*) πολλοί τε τῶν πεπιστευκότων ἤρχοντο ἐξομολογούμενοι καὶ ἀναγγέλλοντες τὰς πράξεις αὐτῶν. ἱκανοὶ δὲ τῶν τὰ περίεργα πραξάντων συνενέγκαντες τὰς βίβλους κατέκαιον ἐνώπιον πάντων· καὶ συνεψήφισαν τὰς τιμὰς αὐτῶν καὶ εὗρον ἀργυρίου μυριάδας πέντε. Οὕτως κατὰ κράτος τοῦ κυρίου ὁ λόγος ηὔξανεν καὶ ἴσχυεν.

τῶν τὰ περίεργα πραξάντων. Illustrate these practices from elsewhere.

(*e*) διότι μαρτύρομαι ὑμῖν ἐν τῇ σήμερον ἡμέρᾳ ὅτι καθαρός εἰμι ἀπὸ τοῦ αἵματος πάντων, οὐ γὰρ ὑπεστειλάμην τοῦ μὴ ἀναγγεῖλαι πᾶσαν τὴν βουλὴν τοῦ θεοῦ ὑμῖν. προσέχετε ἑαυτοῖς καὶ παντὶ τῷ ποιμνίῳ, ἐν ᾧ ὑμᾶς τὸ πνεῦμα τὸ ἅγιον ἔθετο ἐπισκόπους, ποιμαίνειν τὴν ἐκκλησίαν τοῦ θεοῦ, ἣν περιεποιήσατο διὰ τοῦ αἵματος.

5. Explain: ῥαβδοῦχοι—σκεῦος ἐκλογῆς—αἱ ἡμεραὶ τῆς ἀπογραφῆς—οἱ ἐλάβετε τὸν νόμον εἰς διαταγὰς ἀγγέλων—ἄνδρες εὐλαβεῖς.

MONDAY, *May* 26, 1884. 1—4.

STATICS. (A)

1. WHAT is meant by saying that the density of copper is 8·8?

It being given that the mass of a cubic foot of water is 1000 ounces, what is the mass of 60 cubic inches of copper?

2. Explain the meaning of the terms component and resultant.

How must three equal forces act upon a particle so as to produce equilibrium? Hence find the resultant of two equal forces acting at an inclination of four-thirds of a right angle to each other.

3. Enunciate the Parallelogram of Forces, and prove it so far as regards the direction of the resultant for commensurable forces.

Forces of 41, 40 and 9 lbs. acting at a point, produce equilibrium; shew that two of them must be at right angles.

4. Enunciate and prove the Triangle of Forces.

5. State the rule for finding the resultant of two parallel forces, and shew how to obtain the centre of a given system of parallel forces.

If a heavy body hang supported by three strings, two of which are vertical, shew that the third must be vertical also.

6. Define the Moment of a force about a point, and explain the usual convention as to the sign.

Prove, for the case of two parallel forces acting in the same direction, that the sum of their moments about any point in their plane is equal to the moment of their resultant about the same point.

7. Weights of 3, 5, 7 and 9 lbs. are placed in a straight line at distances of 1 ft. from each other. Find the distance of their centre of gravity from the 3 lb. weight.

8. What is meant by mechanical advantage?

Describe the two systems of levers by which mechanical advantage can be obtained, giving an example of each.

A pair of nutcrackers is 5 inches long, and when a nut is placed $\frac{1}{8}$ of an inch from the hinge, a pressure of $3\frac{1}{2}$ lbs. applied at the ends will crack the nut. What weight, if simply placed on the top of the nut, would crack it?

9. Find the connection between the power and weight in that system of pulleys in which all the strings are fastened to a beam to which the weight is attached, all the strings being parallel and the pulleys being supposed weightless.

If there be only two strings attached to the beam and the moveable pulley weighs 1 lb., what power will support a weight of 10 lbs.?

10. If a weight W rests on an inclined plane, when acted upon by a force P parallel to the plane, shew that $P : W ::$ height of plane : length of plane.

Find also the connection between the weight and the pressure on the plane.

MONDAY, *May* 26, 1884. 1—4.

STATICS. (B)

1. DISTINGUISH between the weight and mass of a body.

If water is taken as standard substance, and a cubic foot of water weighs 1000 ounces, find the weight of 300 cubic inches of a metal whose density is 6·4.

2. Explain the terms resultant and component.

ABCD is a rhombus; shew, without assuming the parallelogram of forces, that forces represented by *AB*, *CB*, *CD*, *AD* are in equilibrium.

3. Enunciate the Parallelogram of Forces, and assuming it true for the direction, prove it for the magnitude of the resultant.

Forces of 25, 24 and 7 lbs. acting at a point, produce equilibrium; shew that two of them must be at right angles.

4. Enunciate and prove the Polygon of Forces.

5. Shew that if a body be in equilibrium under the action of three forces in one plane, their directions must either meet in a point or be parallel.

A heavy body can turn freely about a point in it, which is fixed. Find its two positions of equilibrium.

6. Define the Moment of a force about a point, and explain how we give signs to moments.

Prove, for the case of two parallel forces acting in opposite directions, that the sum of their moments about any point in their plane is equal to the moment of their resultant about the same point.

7. Weights of 2, 4, 6 and 8 lbs. are placed in a straight line at distances 2 feet apart. Find the distance of their centre of gravity from the 2 lb. weight.

8. Describe the two systems of levers in which the fulcrum is at one end of the beam, and investigate which must and which cannot possess mechanical advantage.

A pair of nutcrackers is $4\frac{1}{2}$ inches long, and when a nut is placed $\frac{5}{8}$ inch from the hinge, a pressure of $3\frac{3}{4}$ lbs. applied at the ends will crack the nut. What weight, if simply placed on the top of the nut, would crack it?

9. Find the connection between the power and weight in that system of pulleys in which each pulley hangs in the loop of a separate string and all the strings are parallel, the pulleys being supposed weightless.

If there be only two moveable pulleys, whose weights are 1 lb. each, what power will be required to support a weight of 13 lbs.?

10. If a weight W rests upon an inclined plane when acted upon by a horizontal force P, shew that $P : W ::$ height of plane : base of plane.

Find also the connection between the weight and the pressure on the plane.

TUESDAY, *May* 27, 1884. 9—12.

HYDROSTATICS AND HEAT. (A)

1. DISTINGUISH between *elastic fluids* and *inelastic fluids*, giving examples of each.

Enunciate the laws upon which the mathematical theory of Hydrostatics is founded.

2. Two liquids which do not mix with each other are contained in the same vessel: find the pressure at a given point in the lower of these fluids.

A vessel, whose base is a square the side of which measures 6 inches, contains mercury to the depth of an inch, and water is poured upon the mercury to the depth of $10\frac{1}{2}$ inches. If the specific gravity of mercury be 13·5 times that of water, find the pressure on the base of the vessel, it being known that a cubic foot of water weighs 1000 ounces.

3. Into the top of a box, which is horizontal, is fixed a vertical pipe, and water is poured into the pipe so as to fill the box and to stand at a given height in the pipe. Show how to find the pressure on a given portion of the top of the box.

A rectangular box is 18 inches long, 8 inches wide, and 12 inches deep. One of its sides is removed, and a board is nailed on joining that edge of the bottom, from which the side has been removed, to the top of the opposite side, and fitting against the ends of the box so as to be watertight. The box is placed with its base horizontal, and the space between the bottom and the board is filled with water through a small hole made at the top of the board. Find the vertical pressure on the board.

4. Show how to compare the specific gravity of two liquids by means of the hydrostatic balance.

A bar of metal weighs 1275 grains in air, 1147·5 grains in spirit, and 1125 grains in water. Find the specific gravities of the metal and of the spirit, compared to that of water.

5. How can it be proved experimentally that air resists compression?

Describe experiments which show that the pressure of a given quantity of air varies inversely as the space it occupies, as long as its temperature remains unchanged.

6. Describe the Common Pump.

If the water-barometer stand at 33 ft. 8 in., and if a common pump is to be used to raise petroleum from an oil-well, find the greatest height at which the lower valve of the pump can be placed above the surface of the oil in the well. The specific gravity of petroleum is ·8.

7. What is meant when we say that two bodies are in *thermal equilibrium*?

A thermometer is graduated so as to have 40° for its freezing point and 200° for its boiling point. What reading on this instrument will correspond to 67° on Reaumur's thermometer?

8. A given quantity of a gas is made continually to occupy the same space. Explain what changes will take place in its pressure, when changes take place in its temperature.

A straight vertical tube, the section of whose bore is one inch, is closed at its lower end and contains a quantity of air which supports an air-tight piston whose weight is one pound. The position of the piston is observed when the temperature of the air is 31° C., and the weight of the piston is then increased by one pound. Find what increase of temperature will be required to bring back the piston to its former position, the atmospheric pressure being 15 lbs. per square inch, and the *absolute zero* of the air thermometer being −273° C.

9. What is a *thermal unit*? How many such units are expended in raising 6 lbs. of water from 10° C. to 17° C.?

A bar of iron weighing 25 lbs. whose temperature is 16° C. is plunged into 15 lbs. of water at 10° C., when the temperature becomes 11° C. Find the specific heat of iron.

10. Explain how heat is conveyed by means of *conduction*.

Under what circumstances is the flow of heat in a body said to be *steady*?

11. When is a space said to be *saturated with vapour*? If a Wet-and-dry-bulb Thermometer were placed in such a space, how would the two readings of the instrument be, relatively to one another? Give reasons for your answer.

12. A vessel contains water at 1° C., in which is a hollow metal ball, which just floats entirely submerged. If the temperature rise to 4° C., how will the floating of the ball be affected?

TUESDAY, *May* 27, 1884. 9—12.

HYDROSTATICS AND HEAT. (B)

1. DEFINE a *fluid*; and distinguish between *a liquid, a gas,* and *a vapour.*

What is meant by the statement that the pressure of a fluid at a given point is the same in all directions?

2. Two liquids that do not mix meet in a bent tube. Prove that the heights of the upper surfaces of the fluids above their common surface will be inversely proportional to their specific gravities.

The two branches of a uniform bent tube are straight and vertical, and the portion of the tube which unites them is horizontal. Water is poured in sufficient to fill 6 inches of the tube; and then oil, sufficient to occupy 5 inches, is poured in at one end, the specific gravity of the oil being $\frac{4}{5}$ that of water. Find the position of the fluids when they are in equilibrium, the horizontal part of the tube being 2 inches long.

3. A vessel, whose base is horizontal, contains a given depth of liquid. Prove that the pressure on the base will be the same, whatever shape the sides of the vessel may have.

A rectangular box is 18 inches long, 8 inches wide, and 12 inches deep. One of its sides is removed, and a board is nailed on joining that edge of the bottom, from which the side has been removed, to the top of the opposite side, and fitting against the ends of the box so as to be watertight. The box is placed with its base horizontal and the space between the bottom and the board is filled with water through a small hole made at the top of the board. Find the pressure on the bottom, it being known that a cubic foot of water weighs 1000 ounces.

4. Show how to find the specific gravity of a solid lighter than water by means of the hydrostatic balance.

A piece of cork, whose weight is 19 ounces, is attached to a bar of silver weighing 63 ounces; and the two together just float in water. The specific gravity of silver is 10·5 times that of water: find the specific gravity of the cork.

5. How can it be proved experimentally that air has weight?

Describe an instrument which measures the weight of a column of air whose base is at the surface of the earth, and whose top is at the top of the atmosphere.

6. Describe the Forcing-Pump.

A tank on the sea-shore is filled by the tide with sea-water whose specific gravity is 1·025. It is desired to empty it at low-tide by means of a *common pump* whose lower valve is on the same level as the top of the tank. Find the greatest depth which the tank can have so that this may be possible, when the water-barometer stands at 34 ft. 2 in.

7. Define the *temperature of a body.* When are two bodies said to have the same temperature?

A thermometer is graduated so as to have its freezing point at 35° and its boiling point at 195°. What will this instrument indicate when a Reaumur's thermometer stands at 42°?

8. A given quantity of a gas is made continually to have the same pressure. Explain what changes will take place in its volume, when changes take place in its temperature.

A straight vertical tube, closed at its lower end, contains a small quantity of mercury which is supported at the height of 28 inches from the bottom of the tube by air confined in the tube. The temperature of the air is then 7° C. If the temperature be afterwards increased by 20° C., find the position which the mercury will occupy, the *absolute zero* of the air thermometer being − 273° C.

9. Define the *capacity of a body for heat.* What is the capacity for heat of 25 lbs. of water?

A bar of iron weighing 25 lbs. whose temperature is 20° C. is plunged into 12 lbs. of water at 10° C., when the temperature of both becomes 12° C. Find the specific heat of iron.

10. Explain how heat is conveyed by means of *convection.*

How is this principle applied to the warming of buildings by means of hot water?

11. Show how the dew-point may be determined by the use of Daniell's Hygrometer.

12. A vessel contains water at 4° C., in which is a hollow metal ball, which just floats entirely submerged. If the temperature fall to 2° C., how will the floating of the ball be affected?

TUESDAY, *May* 27, 1884. 1—4.

PLAUTUS. TRINUMMUS. (A)

1. Huic Graece nomen est Thesauro fabulae:
Philemo scripsit: Plautus uortit barbare,
Nomen Trinummo fecit.

Translate, and give a short account of Philemon. Explain the two titles thus given to the play by a sketch of the plot. Where is the scene laid? Comment on the word *barbare*. What is the full name of Plautus?

2. Illustrate these proverbs by similar proverbs in any other language:

Nota mala res optuma est.
Tunica proprior pallio est.
Numquam temere tinnit tintinnabulum.

3. State some of the characteristic differences between the Old and New Comedy at Athens. Shew that Plautus introduced Roman ideas and manners into his adaptation of Greek Comedies.

4. Describe the arrangements of a Roman theatre. When were permanent theatres first built in Rome?

5. Translate, commenting on the words in Italics:

(1) Nihil est profecto stultius neque stolidius
Neque mendacilocum neque adeo argutum magis
Neque confidentiloquius neque periurius
Quam urbani *adsidui* ciues, quos scurras uocant.
Atque egomet me adeo cum illis una ibidem traho:
Qui illorum uerbis falsis acceptor fui,
Qui omnia se simulant scire neque quicquam sciunt.
Quod quisque in animo habet aut habiturust, sciunt:
Sciunt quid in aurem rex reginae dixerit:
Sciunt quod Iuno fabulatast cum Ioue:
Quae neque fuerunt neque sunt, tamen illi sciunt.
Falsone an uero laudent, culpent quem uelint,
Non *flocci faciunt*, dum illut quod lubeat sciant.

(2) PH. Semper tu facito, Lesbonice, hoc cogites,
Id optumum esse tute uti sis optumus:
Si id nequeas, saltem ut optumis sis proxumus.
Nunc conditionem hanc, quam ego fero et quam aps te peto,
Dare atque accipere, Lesbonice, te uolo.
Di diuites sunt, deos decent opulentiae
Et *factiones:* uerum nos homunculi
Scintillula animae, quam quom *extemplo* emisimus,
Aequo mendicus atque ille opulentissumus.

(3) CH. Enimuero ego nunc *sucophantae* huic sucophantari uolo,
Si hunc possum illo mille *nummum Philippum* circumducere,
Quod sibi me dedisse dixit. quem ego qui sit homo nescio
Neque oculis ante hunc diem umquam uidi, eine aurum crederem?
Quoi, si capitis res sit, nummum numquam credam *plumbeum*.

6. Translate and explain the following:

Ego meo sum promus pectore. Nummum Philippeum ad tria millia. Siquid eo fuerit. Aedes uenales hasce inscripsit literis. Posticulum hoc recepit quom aedis uendidit. Apage sis amor: tuas tibi res habeto. Quin me ad plures penetraui prius. Sarta tecta tua praecepta usque habui mea modestia. Cena hac annonast sine sacris hereditas.

7. Discuss the following words, giving where you can derivations and an account of their forms: face, suspicarier, pote, occultassis, sectius, eampse, posiueris, temperi, gerrae, sodes.

8. Comment on the construction of the following:

Nullus creduas. Licitum est si uelles. Di me perdant si te flocci facio an periisses prius. Quin ad frugem corrigis? Minus quindecim dies sunt quom minas accepisti.

9. Give the forms used by Plautus of the perf. indic. and pres. subj. of *sum*, and the pres. subj. of *do*.

TUESDAY, *May* 27, 1884. 1—4.

PLAUTUS. TRINUMMUS. (B)

1. Primum mihi Plautus nomen Luxuriae indidit:
Tum illanc mihi esse gnatam uoluit Inopiam.

Translate and explain the point by a sketch of the story of the play. From whom did Plautus translate the Trinummus, and what was the Greek name of it? What is the object and origin of a Prologue?

2. ST. Ecce hominem te, Stasime, nihili: satin in thermopolio
Condalium es oblitus, postquam thermopotasti gutturem?
Recipe te et recurre petere re recenti.

Explain the allusion in *condalium*. What do you gather from the play as to the position of slaves?

3. Name some writers of Latin Comedy contemporary with or anterior to Plautus. From what sources did they take their plots? What is meant by the terms *Comoediae togatae*, and *Comoediae palliatae*?

4. Compare the arrangements of a Roman with those of a Greek Theatre, especially as to the Orchestra. What disadvantages did they present to a Playwriter as compared with the Modern Stage?

5. Translate, commenting on the words in Italics:

(1) PH. De mendico male meretur qui ei dat quod *edit* aut bibat:
Nam et illut quod dat perdit et illi prodit uitam ad miseriam.
Non eo haec dico, quin quae tu uis ego uelim et faciam lubens:
Set ego hoc uerbum quom illi quoidam dico, praemonstro tibi,
Vt ita te aliorum miserescat, ne *tis* alios misereat.

(2) CH. Lubet audire, nisi molestumst. SV. Quin discupio dicere.
Omnium primum in Pontum aduecti ad Arabiam terram sumus.
CH. Eho,
An etiam in Ponto Arabiast? SV. Est: non illa ubi tus gignitur,
Set ubi apsinthium fit ac cunila gallinacea.
CH. Nimium *graphicum* hunc nugatorem. set ego sum insipientior,
Qui egomet unde redeam hunc rogitem, quae ego sciam atque hic nesciat:
Nisi quia lubet experiri quo euasurust denique.
Set quid ais? quo inde isti porro? SV. Si animum aduortes, eloquar:
Ad caput amnis qui de caelo exoritur sub solio Iouis.
CH. Sub solio Iouis? SV. Ita dico. CH. E caelo? SV. Atque e medio quidem.
CH. Eho,
An etiam in caelum escendisti? SV. Immo *horiola* aduecti sumus.
Vsque aqua aduorsa per amnem. CH. An tu etiam uidisti Iouem?
SV. Eum alii di isse ad uillam aibant seruis *depromptum* cibum.

(3) Mores leges perduxerunt iam in potestatem suam,
Magis *quis* sunt obnoxiosae quam parentes liberis.
Eae misere etiam ad parietem sunt fixae clauis ferreis,
Vbi malos mores adfigi nimio *fuerat* aequius.

6. Translate and explain the following:

Fit miser ex animo factius nihilo facit. Cum uostris nostra non est aequa factio. Ad incitas reductus. Caue sis feceris. Tam modo inquit Praenestinus. Census quom sum iuratori recte rationem dedi. Caue sis ne bubuli in te Cottabi crebri crepent. Collicrepidae cruricrepidae ferriteri mastigiae. Vt ei rei pater sit fundus potior.

7. Discuss the following words, giving where you can derivations and an account of their forms: faxo, detraxe, potin, surpuerit, sectius, creduas, eampse, cluet, peculium, concubium noctis.

8. Comment on the construction of: Si quid eo fuerit. Hostisne an ciuis comedis parui pendis. Ne tu hercle faxo hau nescias quam rem egeris.

9. What forms does Plautus use for the present subjunctive of *possum* and *perdo*? And how does he construct *fungor* and *utor*?

WEDNESDAY, *May* 28, 1884. 9—12.

HERODOTUS. BOOK VI. (A)

1. GIVE some account of the Greek tyrants, illustrating from this Book.

2. Describe the Persian Empire at the date of Darius' first invasion of Greece.

3. Quote any lines of English poetry you can remember about the battle of Marathon. What was the general effect of the victory?

4. Translate:

(*a*) ὁ δὲ ἀνάγων ἑκάστοτε ἐπὶ κέρας τὰς νέας, ὅκως τοῖσι ἐρέτῃσι χρήσαιτο διέκπλοον ποιεύμενος τῇσι νηυσὶ δι' ἀλληλέων καὶ τοὺς ἐπιβάτας ὁπλίσειε, τὸ λοιπὸν τῆς ἡμέρης τὰς νέας ἔχεσκε ἐπ' ἀγκυρέων, παρεῖχέ τε τοῖσι Ἴωσι πόνον δι' ἡμέρης.

Explain ἐπὶ κέρας—διέκπλοον.

(*b*) ταῦτα μὲν τὰ ἐμπολέμια, τὰ δὲ ἄλλα τὰ εἰρηναῖα κατὰ τάδε σφι δέδοται· ἢν θυσίην τις δημοτελέα ποιέηται, πρώτους ἐπὶ τὸ δεῖπνον ἵζειν τοὺς βασιλέας καὶ ἀπὸ τούτων πρῶτον ἄρχεσθαι, διπλήσια νέμοντας ἑκατέρῳ τὰ πάντα ἢ τοῖσι ἄλλοισι δαιτυμόσι· καὶ σπονδαρχίας εἶναι τούτων, καὶ τῶν τυθέντων προβάτων τὰ δέρματα.

To what extent was the power of the Spartan kings limited?

(*c*) *ὁ δέ σφι ἔλεξε, οὔτε εἰ ψευδόμενος οὔτε εἰ ἀληθέα λέγων, ἔχω σαφηνέως εἰπαι, ἔλεξε δ' ὧν φάμενος, ἐπεί τε δὴ τὸ τοῦ Ἄργου ἱρὸν εἷλε, δοκέειν οἱ ἐξεληλυθέναι τὸν χρησμὸν τοῦ θεοῦ*. πρὸς ὧν ταῦτα οὐ δικαιοῦν πειρᾶν τῆς πόλιος, πρίν γε δὴ ἱροῖσι χρήσηται καὶ μάθῃ, εἴτε οἱ ὁ θεὸς παραδιδοῖ εἴτε οἱ ἐμποδὼν ἕστηκε.

Write down the Attic equivalents of any Ionicisms occurring in the sentence marked *—*.

(*d*) ταῦτα ἀκούσας ὁ Γλαῦκος συγγνώμην τὸν θεὸν παραιτέετο αὐτῷ σχεῖν τῶν ῥηθέντων. ἡ δὲ Πυθίη ἔφη τὸ πειρηθῆναι τοῦ θεοῦ καὶ τὸ ποιῆσαι ἴσον δύνασθαι. τοῦ δὲ εἵνεκεν ὁ λόγος ὅδε, ὦ Ἀθηναῖοι, ὡρμήθη λέγεσθαι ἐς ὑμέας, εἰρήσεται· Γλαύκου νῦν οὔτε τι ἀπόγονόν ἐστι οὐδὲν οὔτ' ἰστίη οὐδεμία νομιζομένη εἶναι Γλαύκου, ἐκτέτριπταί τε πρόρριζος ἐκ Σπάρτης.

What rule do you deduce from this story as to the acceptance of evidence from accused persons?

(*e*) ταῦτα ὧν πάντα ἐς σὲ νῦν τείνει καὶ ἐκ σέο ἤρτηται· ἢν γὰρ σὺ γνώμῃ τῇ ἐμῇ προσθῇ, ἔστι τοι πατρίς τε ἐλευθέρη καὶ πόλις πρώτη τῶν ἐν τῇ Ἑλλάδι, ἢν δὲ τὴν τῶν ἀποσπευδόντων τὴν συμβολὴν ἕλῃ, ὑπάρξει τοι τῶν ἐγὼ κατέλεξα ἀγαθῶν τὰ ἐναντία.

5. Illustrate from Herodotus as to the Πανιόνιον—θεωρίς—divisions of the Greek month.

WEDNESDAY, *May* 28, 1884. 9—12.

HERODOTUS. BOOK VI. (B)

1. GIVE some account of the Greek colonies, illustrating from this Book. What do you know of Thurium?

2. Describe the condition of Greece at the date of Darius' first invasion.

3. Illustrate from this Book Herodotus' impartiality—originality—fondness for digressions.

4. Translate:

(*a*) καί οἱ τελευτήσαντι Χερσονησῖται θύουσι, ὡς νόμος οἰκιστῇ, καὶ ἀγῶνα ἱππικόν τε καὶ γυμνικὸν ἐπιστᾶσι, ἐν τῷ Λαμψακηνῶν οὐδενὶ ἐγγίνεται ἀγωνίζεσθαι. πολέμου δὲ ἐόντος πρὸς Λαμψακηνοὺς καὶ Στησαγόρην κατέλαβε ἀποθανεῖν ἄπαιδα, πληγέντα τὴν κεφαλὴν πελέκεϊ ἐν τῷ πρυτανηΐῳ πρὸς ἀνδρὸς αὐτομόλου μὲν τῷ λόγῳ, πολεμίου δὲ καὶ ὑποθερμοτέρου τῷ ἔργῳ.

οἰκιστῇ—πρυτανηΐῳ. Explain.

(*b*) προφάσιος ὦν ἐπιλαβόμενοι, ἐπεί τε τάχιστα εἶδον τοὺς Ἴωνας ἀρνευμένους εἶναι χρηστοὺς, ἐν κέρδεϊ ἐποιεῦντο περιποιῆσαι τά τε ἱρὰ τὰ σφέτερα καὶ τὰ ἴδια. Τότε ὦν ἐπεὶ ἐπέπλωον οἱ Φοίνικες, οἱ Ἴωνες ἀντανῆγον καὶ αὐτοὶ τὰς νέας ἐπὶ κέρας.

οἱ Φοίνικες. Account for their action in the campaign.

(*c*) οὐ μὲν οὐδὲ Λευτυχίδης κατεγήρα ἐν Σπάρτῃ, ἀλλὰ τίσιν τοιήνδε τινὰ Δημαρήτῳ ἐξέτισε· ἐστρατήγησε Λακεδαιμονίοισι ἐς Θεσσαλίην, παρεὸν δέ οἱ ὑποχείρια πάντα ποιήσασθαι ἐδωροδόκησε ἀργύριον πολλόν. ἐπ' αὐτοφώρῳ δὲ ἁλοὺς αὐτοῦ ἐν τῷ στρατοπέδῳ, ἐπικατήμενος χειρίδι πλέῃ ἀργυρίου, ἔφυγε ἐκ Σπάρτης ὑπὸ δικαστήριον ὑπαχθεὶς, καὶ τὰ οἰκία οἱ κατεσκάφη.

παρεόν. What is the construction? Give similar instances.

(*d*) Ἀθηναίοισι μὲν δὴ πόλεμος συνῆπτο πρὸς Αἰγινήτας, ὁ δὲ Πέρσης τὸ ἑωυτοῦ ἐποίεε ὥστε ἀναμιμνήσκοντός τε αἰεὶ τοῦ θεράποντος μεμνῆσθαί μιν τῶν Ἀθηναίων καὶ Πεισιστρατιδέων προσκατημένων καὶ διαβαλλόντων Ἀθηναίους, ἅμα δὲ βουλόμενος ὁ Δαρεῖος ταύτης ἐχόμενος τῆς προφάσιος καταστρέφεσθαι τῆς Ἑλλάδος τοὺς μὴ δόντας αὐτῷ γῆν τε καὶ ὕδωρ.

μεμνῆσθαι κ.τ.λ. What does this allude to?

(*e*) ἢν μέν νυν μὴ συμβάλωμεν, ἔλπομαί τινα στάσιν μεγάλην ἐμπεσοῦσαν διασείσειν τὰ Ἀθηναίων φρονήματα ὥστε μηδίσαι, ἢν δὲ συμβάλωμεν πρίν τι καὶ σαθρὸν Ἀθηναίων μετεξετέροισι ἐγγενέσθαι, θεῶν τὰ ἴσα νεμόντων οἷοι τέ εἰμεν περιγενέσθαι τῇ συμβολῇ.

5. Illustrate from Herodotus as to the Delphic oracle—πρόξενοι—insecurity of life and property.

WEDNESDAY, *May* 28, 1884. 1—4.

ALGEBRA. (A)

1. SOLVE the equations:

(i) $\frac{7x-3}{6}-\frac{3x+4}{13}=\frac{x+2}{5}+\frac{3x+2}{11}$.

(ii) $(x+a)(x-b)-2a^2b=(x+b)(x-a)-2b^2a$.

(iii) $\begin{cases}7x-3y=3,\\5x+7y=25.\end{cases}$

(iv) $6(2x^2-1)=x$.

2. A tourist finds that, if he spends sixteen shillings a day, the money at his disposal will enable him to go on for two days longer than if he spent eighteen shillings a day. How much money has he?

3. A man wishes to drive to a certain town. There are two roads by which he can go, one of which is three miles longer than the other. He can drive at the rate of ten miles an hour along the longer road, but at the rate of only eight miles an hour along the shorter. He finds that to go by the longer road will take him three minutes more than it would to go by the shorter. Find the lengths of the roads.

4. Solve the equations:

(i) $ab(x+1)x+a^2=(a^2+2b^2)x+4b^2$.

(ii) $\sqrt{\frac{x+7}{2}}+\sqrt{\frac{x-7}{2}}=7$.

(iii) $\begin{cases}x^2-3xy=-2,\\y^2+5xy=11.\end{cases}$

5. Find the relation that must exist between the quantities a, b, c, so that the equation $ax^2+bx+c=0$ may have one of its roots double of the other.

6. A sum of £3000 is divided into two unequal portions, and these are lent out at rates of interest which differ by one per cent. per annum. It is observed that the income arising from the portion lent at the higher rate of interest is twice that arising from the other portion; also that the whole income arising from the £3000 is twice that which would be obtained by lending out at the lower rate the portion which is lent at the higher rate. Find the rates of interest, and how much is lent at each rate.

7. If the ratio of a to b be a ratio of greater inequality, show that the duplicate ratio of a to b is greater than the ratio of a to b.

Find what quantity must be added to each term of one of these ratios so that it may become equal to the other.

8. The third proportional to two numbers is 162, and the mean proportional between them is 6. Find the numbers.

9. The value of a silver coin varies directly as the square of its diameter, while its thickness remains the same: it also varies directly as its thickness, while its diameter remains the same. Two silver coins have their diameters in the ratio of 5 : 4, find the ratio of their thicknesses if the value of the first be twice that of the second.

10. When is a series of numbers said to be in Arithmetical Progression?

If a be the first term of an arithmetical series and if x be its nth term, find the sum of n terms.

How many terms of the series $19 + 17 + 15 + 13 + \ldots\ldots$ must be taken to amount to 100?

11. Sum the series:

(i) $3{\cdot}5 + 4{\cdot}1 + 4{\cdot}7 + 5{\cdot}3 + \ldots\ldots$ to 12 terms.

(ii) $\frac{2}{3} + \frac{4}{9} + \frac{8}{9} + 1\frac{7}{9} + 3\frac{5}{9} + \ldots\ldots$ to 12 terms.

(iii) $35 + {\cdot}35 + {\cdot}0035 + {\cdot}000035 + \ldots\ldots$ to infinity.

12. From three numbers, which are in Geometrical Progression, three other numbers are subtracted, which are also in G. P. If the remainders be in G. P., prove that all these series have the same common ratio.

WEDNESDAY, *May* 28, 1884. 1—4.

ALGEBRA. (B)

1. SOLVE the equations:

(i) $\dfrac{6x-3}{7} - \dfrac{3x+1}{13} = \dfrac{x+2}{6} + \dfrac{2x+3}{11}$.

(ii) $(x+m)(x-n) - 2m^2n = (x+n)(x-m) - 2n^2m$.

(iii) $\begin{cases} 7x - y = 3, \\ 5x + 4y = 10. \end{cases}$

(iv) $6(2x^2 - 1) = -x$.

2. A tourist finds that, if he spends fifteen shillings a day, the money at his disposal will enable him to go on for two days longer than he could do if he spent seventeen shillings a day? How much money has he?

3. A man wishes to drive to a certain town. There are two roads by which he can go, one of which is two miles longer than the other. He can drive at the rate of ten miles an hour along the longer road, but at the rate of only eight miles an hour along the shorter. He finds that to go by the longer road will take him three minutes less than it would to go by the shorter. Find the lengths of the roads.

4. Solve the equations:

(i) $ab(x-1)x+4a^2=(b^2+2a^2)x+b^2.$

(ii) $\sqrt{\frac{x+7}{2}}-\sqrt{\frac{x-7}{2}}=1.$

(iii) $\begin{cases} x^2-3xy=-5, \\ y^2+5xy=14. \end{cases}$

5. Find the relation that must exist between the quantities a, b, c, so that the equation $ax^2+bx+c=0$ may have one of its roots equal to one-half of the other root.

6. A sum of £2000 is divided into two unequal portions, and these are lent out at rates of interest which differ by one per cent. per annum. It is observed that the income arising from the portion lent at the higher rate of interest, is twice that arising from the other portion; also that the whole income arising from the £2000 is twice that which would be obtained by lending out at the lower rate the portion which is lent at the higher rate. Find the rates of interest, and how much is lent at each rate.

7. If the ratio of a to b be a ratio of less inequality, show that the duplicate ratio of a to b is less than the ratio of a to b.

Find what quantity must be added to each term of one of these ratios so that it may become equal to the other.

8. The third proportional to two numbers is 48, and the mean proportional between them is 6. Find the numbers.

9. The value of a silver coin varies directly as the square of its diameter, while its thickness remains the same: it also varies directly as its thickness, while its diameter remains the same. Two silver coins have their diameters in the ratio of 4 : 3, find the ratio of their thicknesses, if the value of the first be four times that of the second.

10. When is a series of numbers said to be in Arithmetical Progression?

If a be the first term of an arithmetical series and if x be its common difference, find the sum of n terms.

How many terms of the series $29+27+25+23+\ldots\ldots$ must be taken to amount to 200?

11. Sum the series:

(i) $2{\cdot}5+3{\cdot}2+3{\cdot}9+4{\cdot}6+\ldots\ldots$ to 12 terms.

(ii) $\frac{2}{3}+1\frac{1}{3}+2\frac{2}{3}+5\frac{1}{3}+\ldots\ldots$ to 10 terms.

(iii) $25+{\cdot}25+{\cdot}0025+{\cdot}000025+\ldots\ldots$ to infinity.

12. From three numbers, which are in Geometrical Progression, three other numbers are subtracted, which are also in G. P. If the remainders be in G. P. prove that all these series have the same common ratio.

THURSDAY, *May* 29, 1884. 9—12.

SHAKESPEARE'S MACBETH.

1. To what group of plays is *Macbeth* assigned?

How is this conclusion supported by the evidence of style?

2. From what source did Shakespeare derive his materials for this play? Give briefly the story which he has used in his account of the murder of Duncan.

3. Discuss an apparent incongruity in the following stage direction—*Enter the three* Witches, *meeting* Hecate.

Discuss also the probability of the character of Hecate having been introduced by some other hand than Shakespeare's.

4. Mention some other passages, besides the preceding, that are said to be non-Shakespearean.

In what different ways has it been sought to account for their presence?

5. Give the name of the speaker and explain the allusions in the following passages:

(*a*) Nothing in his life
Became him like the leaving of it.

(*b*) It was the owl that shriek'd, the fatal bellman,
Which gives the stern'st goodnight.

(*c*) He has no children. All my pretty ones?
Did you say all? O hell-kite! All?

(*d*) Why should I play the Roman fool, and die
On mine own sword?

6. Explain remarkable words, expressions and constructions in the following passages:

(*a*) Thou'ldst have, great Glamis,
That which cries 'Thus thou must do, if thou have it';
And that which rather thou dost fear to do
Than wishest should be undone.

(*b*) Let your remembrance apply to Banquo;
Present him eminence, both with eye and tongue:
Unsafe the while, that we
Must lave our honours in these flattering streams.

(*c*) *Malcolm.* What's the newest grief?
Ross. That of an hour's age doth hiss the speaker;
Each minute teams a new one.

(*d*) Now minutely revolts upbraid his faith-breach.

7. Paraphrase the following passage:

I will advise you where to plant yourselves,
Acquaint you with the perfect spy o' the time,
The moment on't; for't must be done to-night,
And something from the palace; always thought
That I require a clearness; and with him—
To leave no rubs nor botches in the work—
Fleance his son
must embrace the fate
Of that dark hour.

8. Explain the derivation and meaning of the words minion, penthouse, beldams, foisons.

In what sense does Shakespeare in this play use the words addition, careless, trifled, file, mated, patch?

9. Describe the three apparitions in Act IV., Scene I., state what each of them represented, and give the purport of their respective messages.

THURSDAY, *May* 29, 1884. 9—12.

SUBJECTS FOR ESSAYS.

(*Only one Subject to be taken up.*)

1. Recent earthquakes.
2. The new Museum of Classical Archaeology.
3. The influence of theatrical performances in Cambridge.
4. Land Nationalisation.

THURSDAY, *May* 29, 1884. 1—4.

FOR LATIN PROSE:

(1) Now when they came back to Rome King Tarquin was besieging Ardea; and as the city was strong, his army lay a long while before it, till it should be forced to yield through famine. So the Romans had leisure for feasting and for diverting themselves. And once Titus and Aruns were supping with their brother Sextus, and their cousin Tarquin of Collatia was supping with them; and they disputed about their wives, whose wife was the worthiest lady. Then said Tarquin of Collatia, "Let us go, and see with our own eyes what our wives are doing, so shall we know which is the worthiest." Upon this they all mounted their horses, and rode first to Rome; and there they found Lucretia, the wife of Tarquin of Collatia, neither feasting, nor yet sleeping, but she was sitting with all her handmaids around her, and all were working at the loom. So when they saw this, they all said, "Lucretia is the worthiest lady." And she entertained her husband and his kinsmen, and after that they rode back to the Camp before Ardea.

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(2) When the moment came, it seems as if he had desired the fruits of victory without the danger of fighting for it, or else had been frightened and doubtful how to act. When the news of the commotion first reached him, he wrote to the Mayor commanding him in the King's name to take good care of the city; to buy up or secure the arms; to levy men; and, if he found himself unable to hold his ground, to let him know without delay.

PREVIOUS EXAMINATION.

MONDAY, *June* 2, 1884. 9—11½.

PALEY'S EVIDENCES OF CHRISTIANITY. (A)

1. DISCUSS the assertion that the case of miracles is a contest of opposite improbabilities.

2. What considerations render it probable that the propagation of Christianity would be attended with difficulty and danger amongst the Jews?

3. Who was Epictetus, and what does he say about the early Christians?

4. Show that the account given in the New Testament of the sufferings of the first Christians is free from partiality and exaggeration.

5. When did Pliny the younger live? What is his testimony about the worship and morality of the Christians of his time?

6. Give the names of any early heretics or sects mentioned by Paley as receiving and appealing to the Scriptures. State what you know of their doctrines.

7. What is meant by "miracles of a mixed nature"? Give instances of them.

8. What two points does Paley admit in stating the morality of the Gospel as an argument for its truth?

9. What evidential arguments are drawn from the originality of Christ's character?

10. How does Paley limit the connection of Christianity with Jewish History?

MONDAY, *June* 2, 1884. 9—11½.

PALEY'S EVIDENCES OF CHRISTIANITY. (B)

1. SHOW the fallacy of the statement that in advancing accounts of miracles we assign effects without causes.

2. Why was it probable that the first Christians would meet with opposition from the heathen public?

3. Who was Marcus Aurelius, and what does he say about the early Christians?

4. Quote from the New Testament passages containing exhortations to patience in the early Church.

5. Give the name of any book written by Josephus.

What passages does Paley quote from his writings concerning Jesus Christ, and what inferences does he draw from them?

6. What evidence does Paley bring to show that the Scriptures were in very early times collected into a distinct volume?

7. What is meant by "tentative miracles"? Give instances of them.

8. What four points does Paley specially bring out in the moral teaching of the Founder of Christianity?

9. What is the peculiar value of the belief in the Resurrection of Christ as an evidence of Christianity?

10. How does Paley account for the rejection of Christianity by the Jews?

MONDAY, *June* 2, 1884. 1 to 3½ P.M.

EUCLID. (A)

1. DEFINE parallel straight lines, a rhombus, and a tangent to a circle. When are segments of circles said to be similar, and what is meant by a mean proportional between two straight lines?

2. If two triangles have two sides of the one equal to two sides of the other, each to each, and have likewise their bases equal, the angle which is contained by the two sides of the one shall be equal to the angle which is contained by the two sides, equal to them, of the other.

3. Triangles on equal bases, and between the same parallels, are equal.

The sides AB, AC of a triangle ABC are bisected in D, E respectively. Prove that the triangle DBC is double the triangle DEC.

4. If a straight line be divided into any two parts, the rectangle contained by the whole and one of the parts is equal to the rectangle contained by the two parts, together with the square on the aforesaid part.

5. Describe a square that shall be equal to a given rectilineal figure.

On the diagonal of a parallelogram describe a rhombus equal to the parallelogram.

6. If a straight line drawn through the centre of a circle bisect a straight line in it which does not pass through the centre, it shall cut it at right angles.

Prove that the line joining the middle points of two parallel chords of a circle is at right angles to the chords.

7. Bisect a given arc of a circle, that is, divide it into two equal parts.

8. If the vertical angle of a triangle be bisected by a straight line which also cuts the base, the segments of the base shall have the same ratio which the other sides of the triangle have to one another.

On a given base construct a triangle whose sides shall be in the ratio of three to one, and whose vertical angle shall be half a right angle.

9. If four straight lines be proportionals, the rectangle contained by the extremes is equal to the rectangle contained by the means; and if the rectangle contained by the extremes be equal to the rectangle contained by the means, the four straight lines are proportionals.

MONDAY, *June* 2, 1884. 1 to 3½ P.M.

EUCLID. (B)

1. DEFINE a plane rectilineal angle, a square, and a sector of a circle. When are two circles said to touch one another, and what is meant by dividing a straight line in extreme and mean ratio?

2. If two triangles have two sides of the one equal to two sides of the other, each to each, and have also the angles contained by those sides equal to another, they shall also have their bases or third sides equal; and the two triangles shall be equal, and their other angles shall be equal, each to each, namely those to which the equal sides are opposite.

3. Triangles on the same base, and between the same parallels, are equal.

In the sides BC, CD of a parallelogram $ABCD$ points P, Q are taken such that PQ is parallel to BD. Prove that the triangle ABP is equal to the triangle ADQ.

4. If a straight line be divided into any two parts, the rectangles contained by the whole and each of the parts are together equal to the square on the whole line.

5. Divide a given straight line into two parts, so that the rectangle contained by the whole and one of the parts may be equal to the square on the other part.

Prove that the rectangle contained by the two parts is equal to the difference of the squares on the two parts.

6. If a straight line drawn through the centre of a circle cut at right angles a straight line in it which does not pass through the centre, it shall bisect it.

If a diameter AB of a circle cut a chord CD at right angles, prove that the triangles ABC, ABD are equal in all respects.

7. From a given circle cut off a segment containing an angle equal to a given rectilineal angle.

8. If the exterior angle of a triangle, made by producing one of its sides, be bisected by a straight line which also cuts the base produced, the segments between the dividing straight line and the extremities of the base shall have the same ratio which the other sides of the triangle have to one another.

On a given base construct a triangle whose sides shall be in the ratio of two to one, and whose vertical angle shall be two-thirds of a right angle.

9. If three straight lines be proportionals, the rectangle contained by the extremes is equal to the square on the mean; and if the rectangle contained by the extremes be equal to the square on the mean, the three straight lines are proportionals.

TUESDAY, *June* 3, 1884. 9—11½.

ARITHMETIC. (A)

1. A RENT charge is derived from 570 bushels of wheat at 7*s.* 0¼*d.* per bushel and 727½ bushels of oats at 2*s.* 9*d.* per bushel. Find its value.

2. In a bag of 2760 coins there are equal numbers of sovereigns, half-sovereigns, crowns, half-crowns, florins, shillings, sixpences and threepenny pieces. Find the total value of the coins.

3. A labourer in charge of a horse-roller traverses 99 miles in rolling a field of 40 acres. Find the width of the roller.

4. Simplify (α) $2\frac{1}{2} - 3\frac{1}{4} - 4\frac{1}{3} - 5\frac{1}{6} + 252\frac{1}{12}$.

(β) $\dfrac{\cdot 304 \times \cdot 002 \times 1\cdot 8}{\cdot 0009 \times \cdot 038}$.

5. What is meant by an aliquot part?

Find by Practice the value of 3049 articles at £7. 12*s.* 9¾*d.* each.

6. Find the simple interest on £4951. 6*s.* 8*d.* for 2½ years at 3½ per cent.

7. Reduce (α) $\frac{3}{20}$ of 4 guineas to the fraction of £7.

(β) £3. 17*s.* 2½*d.* to the decimal of £4.

8. Find the value of (α) $\frac{3}{7}$ of £1. 11*s.* 8½*d.* + $2\frac{5}{6}$ of £3. 16*s.* 0¾*d.*

(β) ·21985 of £50 + ·9651041$\dot{6}$ of £4.

9. A man has a sum of money due to him at the end of 4 years' time. What fraction of the sum could he take off for payment at once, simple interest being reckoned at 5 per cent.?

10. Find the cost of papering the walls of a room 20 ft. 7 in. long, 14 ft. 5 in. broad, and 12 ft. high with paper 2 ft. 6 in. wide at 4½*d.* per yard.

11. Shew the truth of the following statement:

"The redemption of a 2½ per cent. stock at 92½ would be equivalent to cancelling Consols at 111."

TUESDAY, *June* 3, 1884. 9—11½.

ARITHMETIC. (B)

1. A RENT charge is derived from 505½ bushels of barley at 3*s.* 11½*d.* per bushel, and 1455 bushels of oats at 2*s.* 9*d.* per bushel. Find its value.

2. In a bag of coins there are equal numbers of sovereigns, half-sovereigns, crowns, half-crowns, florins, shillings, sixpences and threepenny pieces. The total value of the coins is £948. 15*s.* 0*d.* Find the number of each sort.

3. A labourer in charge of a horse-roller 40 inches wide rolls a field of 10 acres. Find the distance he walks.

4. Simplify (α) $3\frac{1}{3} - 2\frac{4}{5} - 4\frac{1}{20} + 343\frac{1}{30}$.

(β) $\dfrac{\cdot 203 \times \cdot 0003 \times 16}{\cdot 008 \times \cdot 0029}$.

5. What is meant by an aliquot part?

Find by Practice the value of 3254 articles at £3. 17*s.* 2¼*d.* each.

6. Find the simple interest on £3713. 10*s.* 0*d.* for 1¼ years at 7 per cent.

7. Reduce (α) 10 ft. 3¾ in. to the fraction of half a mile.

(β) £3. 15*s.* 6¼*d.* to the decimal of £3.

8. Find the value of (α) $1\frac{5}{12}$ of £7. 12*s.* 1½*d.* + $\frac{3}{14}$ of £4. 15*s.* 1½*d.*

(β) ·6215 of £5 + 1·2586805̇ of £3.

9. A man had a bill of £282 due to him at the end of 4 years. Find what sum he could take for a cash payment, simple interest being reckoned at 5 per cent.

10. Find the cost of papering the walls of a room 30 ft. 4 in. long, 20 ft. 2 in. broad and 10 ft. high with paper 3 ft. 4 in. wide at 2½*d.* per foot.

11. Shew the truth of the following statement:

The redemption of a 2½ per cent. stock at par would be equivalent to cancelling Consols at 120."

TUESDAY, *June* 3, 1884. 1—3½.

ELEMENTARY ALGEBRA. (A)

1. SIMPLIFY:

(α) $17a - [25(b-2c) - (13a - \overline{5b+4c})]$,

(β) $(a-2b)^2 + 4(a-b)(b-c) + (2b-c)^2 - (a^2+c^2)$.

2. Resolve into the simplest possible factors:

(α) $x^2 - 17xy + 66y^2$,

(β) $a^2 - b^2 + 8bc - 16c^2$,

(γ) $x^2(x+y)^2 - (x^2+y^2)^2$.

3. Define the Lowest Common Multiple of two algebraical expressions.

Find the Highest Common Factor of

$$x^3 - 15x^2 + 65x - 72 \text{ and } x^3 - 18x^2 + 91x - 88.$$

4. Prove that

$$(x+y-z)^2 + (1-x)(1+x) + (1-y)(1+y) + (1-z)(1+z)$$
$$= (1+xy)^2 + (1-yz)^2 + (1-zx)^2 - (x^2y^2 + y^2z^2 + z^2x^2).$$

5. Extract the square roots of

(α) $\dfrac{1}{16x^2} + \dfrac{x^2}{9y^2} - \dfrac{1}{6y}$,

(β) $9x^4 - 24x^3y + 40x^2y^2 - 32xy^3 + 16y^4$.

6. Solve the equations:

(α) $\dfrac{11-x}{5} - \dfrac{x-8}{7} = \dfrac{7-x}{2} + \dfrac{99}{70}$,

(β) $\begin{cases} \dfrac{10}{y} - \dfrac{2}{x} = 1, \\ \dfrac{3}{y} + \dfrac{2}{x} = 1\frac{3}{5}. \end{cases}$

7. If $x - 3y = 2x + y - 15 = 1$,

shew that $x^2 + y^2 = 4xy - 3$.

8. Solve the equations:

(α) $1 - \dfrac{4}{x-3} - \dfrac{3}{(x-3)(x-5)} = 0$,

(β) $x^2 + q^2y^2 = p^2 + 2pq + 2q^2$

$xy = p + q$.

9. Multiply $x - x^{\frac{1}{2}}y^{\frac{1}{2}} + y$ by $2x^{\frac{1}{2}} - 7y^{\frac{1}{2}}$.

10. Find the quantity which when subtracted from each term of the ratio $a : b$ makes the ratio of the results equal to the duplicate ratio of $a : b$.

11. If x varies inversely as yz and y varies directly as z^2, shew that z varies inversely as $\sqrt[3]{x}$.

If x vary as the sum of the squares of two quantities y and z whose product is constant, find the value of x when $y = 2$ it being given that when $x = 3$, $y = 3$, and $z = 3$.

TUESDAY, *June* 3, 1884. 1—3½.

ELEMENTARY ALGEBRA. (B)

1. SIMPLIFY:

(α) $25a - [19(b-2c) - (15a + 2c - 21b)]$,

(β) $(a-3b)^2 + 6(a-b)(b-c) + (3b-c)^2 + 6(ac - 2b^2)$.

2. Resolve into the simplest possible factors:

(α) $x^2 - 19xy + 88y^2$,

(β) $a^2 - b^2 + 6bc - 9c^2$,

(γ) $x^2(x-y)^2 - (x^2+y^2)^2$.

3. Define the Highest Common Factor of two algebraical expressions. Find the Highest Common Factor of

$$x^3 - 19x^2 + 101x - 99 \text{ and } x^3 - 16x^2 + 72x - 81.$$

4. Prove that

$$(x+y+z)^2 + (1-x)(1+x) + (1-y)(1+y) + (1-z)(1+z)$$
$$= (1+xy)^2 + (1+yz)^2 + (1+zx)^2 - (x^2y^2 + y^2z^2 + z^2x^2).$$

5. Extract the square roots of

(1) $\dfrac{1}{9x^2} + \dfrac{x^2}{4y^2} - \dfrac{1}{3y}$,

(2) $9x^4 - 12x^3y + 10x^2y^2 - 4xy^3 + y^4$.

6. Solve the equations:

(α) $\dfrac{x+1}{5} - \dfrac{2-x}{7} = \dfrac{x-3}{2}$,

(β) $\begin{cases} \dfrac{4}{x} - \dfrac{9}{y} = 2, \\ \dfrac{3}{y} - \dfrac{1}{x} + \dfrac{1}{6} = 0. \end{cases}$

7. If $$x - 2y = 3x + y - 23 = 1,$$
shew that $$x^2 + y^2 = 3xy - 5.$$

8. Solve the equations:

(α) $1 - \dfrac{7}{x-3} + \dfrac{2}{(x-7)(x-3)} = 0.$

(β) $\begin{cases} x^2 + q^2y^2 = p^2 - 2pq + 2q^2, \\ xy = p - q. \end{cases}$

9. Divide $2x^{\frac{3}{2}} - 17xy^{\frac{1}{2}} + 17x^{\frac{1}{2}}y - 15y^{\frac{3}{2}}$ by $2x^{\frac{1}{2}} - 15y^{\frac{1}{2}}$.

10. Find the quantity which when subtracted from each term of the ratio $a^2 : b^2$ makes the ratio of the results equal to the triplicate ratio of $a : b$.

11. If x varies directly as y and y varies inversely as z^2 shew that z varies inversely as $\sqrt{x}$.

If x vary as the sum of the cubes of two quantities y and z whose sum is constant, find the value of x when $y = 2$, it being given that when $x = 3$, $y = 3$ and $z = 3$.

WEDNESDAY, *June* 4, 1884. 9—11½.

ST MARK'S GOSPEL. (A)

1. TRANSLATE:

ἡ δὲ Ἡρωδιὰς ἐνεῖχεν αὐτῷ, καὶ ἤθελεν αὐτὸν ἀποκτεῖναι· καὶ οὐκ ἠδύνατο· ὁ γὰρ Ἡρώδης ἐφοβεῖτο τὸν Ἰωάννην, εἰδὼς αὐτὸν ἄνδρα δίκαιον καὶ ἅγιον, καὶ συνετήρει αὐτόν· καὶ ἀκούσας αὐτοῦ, πολλὰ ἠπόρει, καὶ ἡδέως αὐτοῦ ἤκουε. καὶ γενομένης ἡμέρας εὐκαίρου, ὅτε Ἡρώδης τοῖς γενεσίοις αὐτοῦ δεῖπνον ἐποίησε τοῖς μεγιστᾶσιν αὐτοῦ καὶ τοῖς χιλιάρχοις καὶ τοῖς πρώτοις τῆς Γαλιλαίας, καὶ εἰσελθούσης τῆς θυγατρὸς αὐτῆς τῆς Ἡρωδιάδος καὶ ὀρχησαμένης, ἤρεσε τῷ Ἡρώδῃ καὶ τοῖς συνανακειμένοις, ὁ δὲ βασιλεὺς εἶπε τῷ κορασίῳ, Αἴτησόν με ὃ ἐὰν θέλῃς, καὶ δώσω σοί.

Parse *ἠπόρει, ἐνεῖχεν.*

2. Translate:

καὶ ἰδὼν αὐτόν, τὸ πνεῦμα εὐθὺς συνεσπάραξεν αὐτόν· καὶ πεσὼν ἐπὶ τῆς γῆς ἐκυλίετο ἀφρίζων. καὶ ἐπηρώτησε τὸν πατέρα αὐτοῦ, Πόσος χρόνος ἐστίν, ὡς τοῦτο γέγονεν αὐτῷ; ὁ δὲ εἶπεν, Ἐκ παιδιόθεν· καὶ πολλάκις καὶ εἰς πῦρ αὐτὸν ἔβαλε καὶ εἰς ὕδατα, ἵνα ἀπολέσῃ αὐτόν· ἀλλ' εἴ τι δύνῃ, βοήθησον ἡμῖν σπλαγχνισθεὶς ἐφ' ἡμᾶς. ὁ δὲ Ἰησοῦς εἶπεν αὐτῷ, Τὸ εἰ δύνῃ· πάντα δυνατὰ τῷ πιστεύοντι. εὐθέως κράξας ὁ πατὴρ τοῦ παιδίου ἔλεγε, Πιστεύω· βοήθει μου τῇ ἀπιστίᾳ. ἰδὼν δὲ ὁ Ἰησοῦς ὅτι ἐπισυντρέχει ὄχλος, ἐπετίμησε τῷ πνεύματι τῷ ἀκαθάρτῳ λέγων αὐτῷ, Τὸ πνεῦμα τὸ ἄλαλον καὶ κωφόν, ἐγώ σοι ἐπιτάσσω, ἔξελθε ἐξ αὐτοῦ, καὶ μηκέτι εἰσέλθῃς εἰς αὐτόν. καὶ κράξας, καὶ πολλὰ σπαράξας, ἐξῆλθε· καὶ ἐγένετο ὡσεὶ νεκρός, ὥστε τοὺς πολλοὺς λέγειν ὅτι Ἀπέθανεν.

Parse *σπλαγχνισθείς, ἐκυλίετο.*

3. Translate:

καὶ ἀποκριθεὶς ὁ Ἰησοῦς ἔλεγε, διδάσκων ἐν τῷ ἱερῷ, Πῶς λέγουσιν οἱ γραμματεῖς ὅτι ὁ Χριστὸς υἱός ἐστι Δαβίδ; αὐτὸς Δαβὶδ εἶπεν ἐν τῷ Πνεύματι τῷ Ἁγίῳ, Εἶπεν ὁ Κύριος τῷ κυρίῳ μου, Κάθου ἐκ δεξιῶν μου, ἕως ἂν θῶ τοὺς ἐχθρούς σου ὑποπόδιον τῶν ποδῶν σου. αὐτὸς Δαβὶδ λέγει αὐτὸν κύριον· καὶ πόθεν υἱὸς αὐτοῦ ἐστι; καὶ ὁ πολὺς ὄχλος ἤκουεν αὐτοῦ ἡδέως.

Explain the argument. What passage is referred to?

Parse *θῶ, κάθου.*

4. Translate and explain:

(*a*) *καὶ ἐπέταξεν αὐτοῖς ἀνακλιθῆναι πάντας συμπόσια συμπόσια.*

(*b*) *τῇ πρώτῃ ἡμέρᾳ τῶν ἀζύμων, ὅτε τὸ πάσχα ἔθυον.*

(*c*) *περὶ δὲ τῶν νεκρῶν, ὅτι ἐγείρονται, οὐκ ἀνέγνωτε ἐν τῇ βίβλῳ Μωσέως, ἐπὶ τῆς βάτου....;*

(*d*) *καὶ ἐδίδουν αὐτῷ ἐσμυρνισμένον οἶνον· ὁ δὲ οὐκ ἔλαβε.*

5. Explain *Ἀββᾶ, Ἡρωδιανοί, γενέσια, Γεννησαρέτ, βαπτισμοί, Λεγεών.*

WEDNESDAY, *June* 4, 1884. 9—11½.

ST MARK'S GOSPEL. (B)

1. TRANSLATE:

καὶ λέγει αὐτοῖς, Οὕτω καὶ ὑμεῖς ἀσύνετοί ἐστε; οὐ νοεῖτε ὅτι πᾶν τὸ ἔξωθεν εἰσπορευόμενον εἰς τὸν ἄνθρωπον οὐ δύναται αὐτὸν κοινῶσαι, ὅτι οὐκ εἰσπορεύεται αὐτοῦ εἰς τὴν καρδίαν ἀλλ' εἰς τὴν κοιλίαν, καὶ εἰς τὸν ἀφεδρῶνα ἐκπορεύεται;—καθαρίζων πάντα τὰ βρώματα. ἔλεγε δὲ ὅτι Τὸ ἐκ τοῦ ἀνθρώπου ἐκπορευόμενον, ἐκεῖνο κοινοῖ τὸν ἄνθρωπον. ἔσωθεν γάρ, ἐκ τῆς καρδίας τῶν ἀνθρώπων, οἱ διαλογισμοὶ οἱ κακοὶ ἐκπορεύονται, πορνεῖαι, κλοπαί, φόνοι, μοιχεῖαι, πλεονεξίαι, πονηρίαι, δόλος, ἀσέλγεια, ὀφθαλμὸς πονηρός, βλασφημία, ὑπερηφανία, ἀφροσύνη· πάντα ταῦτα τὰ πονηρὰ ἔσωθεν ἐκπορεύεται, καὶ κοινοῖ τὸν ἄνθρωπον.

Parse *καθαρίζων, κοινοῖ.*

2. Translate:

καὶ ἐλθόντες πρὸς τοὺς μαθητὰς εἶδον ὄχλον πολὺν περὶ αὐτούς, καὶ γραμματεῖς συζητοῦντας πρὸς αὐτούς. καὶ εὐθέως πᾶς ὁ ὄχλος ἰδὼν αὐτὸν ἐξεθαμβήθη, καὶ προστρέχοντες ἠσπάζοντο αὐτόν. καὶ ἐπηρώτησεν αὐτούς, Τί συζητεῖτε πρὸς αὐτούς; καὶ ἀπεκρίθη αὐτῷ εἷς ἐκ τοῦ ὄχλου, Διδάσκαλε, ἤνεγκα τὸν υἱόν μου πρός σε, ἔχοντα πνεῦμα ἄλαλον· καὶ ὅπου ἂν αὐτὸν καταλάβῃ, ῥήσσει αὐτόν· καὶ ἀφρίζει, καὶ τρίζει τοὺς ὀδόντας, καὶ ξηραίνεται. καὶ εἶπον τοῖς μαθηταῖς σου ἵνα αὐτὸ ἐκβάλωσι, καὶ οὐκ ἴσχυσαν. ὁ δὲ ἀποκριθεὶς αὐτοῖς λέγει, Ὦ γενεὰ ἄπιστος, ἕως πότε πρὸς ὑμᾶς ἔσομαι; ἕως πότε ἀνέξομαι ὑμῶν; φέρετε αὐτὸν πρός με. καὶ ἤνεγκαν αὐτὸν πρὸς αὐτόν.

Parse *ἀνέξομαι, ἐξεθαμβήθη.*

3. Translate:

ὅταν δὲ ἴδητε τὸ βδέλυγμα τῆς ἐρημώσεως ἑστηκότα ὅπου οὐ δεῖ (ὁ ἀναγινώσκων νοείτω), τότε οἱ ἐν τῇ Ἰουδαίᾳ φευγέτωσαν εἰς τὰ ὄρη· ὁ δὲ ἐπὶ τοῦ δώματος μὴ καταβάτω, μηδὲ εἰσελθέτω ἆραί τι ἐκ τῆς οἰκίας αὐτοῦ· καὶ ὁ εἰς τὸν ἀγρὸν μὴ ἐπιστρεψάτω εἰς τὰ ὀπίσω ἆραι τὸ ἱμάτιον αὐτοῦ. οὐαὶ δὲ ταῖς ἐν γαστρὶ ἐχούσαις καὶ ταῖς θηλαζούσαις ἐν ἐκείναις ταῖς ἡμέραις.

Explain *βδέλυγμα τῆς ἐρημώσεως. φευγέτωσαν*—how was this obeyed?

Parse *καταβάτω, ἆραι.*

4. Translate and explain:

(*a*) *καὶ ἀνέπεσον πρασιαὶ πρασιαί.*

(*b*) *προέλαβε μυρίσαι μου τὸ σῶμα εἰς τὸν ἐνταφιασμόν.*

(*c*) *πρώτη ἐστίν, Ἄκουε, Ἰσραήλ· Κύριος ὁ Θεὸς ἡμῶν Κύριος εἷς ἐστί· καὶ ἀγαπήσεις Κύριον τὸν Θεόν σου . . .*

(*d*) *ἀγγαρεύουσι παράγοντά τινα Σίμωνα Κυρηναῖον . . . ἵνα ἄρῃ τὸν σταυρὸν αὐτοῦ.*

5. Explain *βοανεργές, Καναναῖος, ἀλεκτοροφωνία, Δεκάπολις, ὁλοκαυτώματα, πραιτώριον.*

WEDNESDAY, *June* 4, 1884. 1—3½.

VIRGIL, AENEID, BOOKS IX. X. (A)

Questions I. II. III. *may not be left unanswered.*

I. EXPLAIN clearly, in order, the mythological and geographical allusions in all the following passages, and where possible give the modern names of places mentioned.

II. Parse the words in Italics and quote the rules exemplified by their use.

III. Translate and, where necessary, explain the following passages:

(i) et tua progenies mortalia demoror arma!

(ii) incipe, si qua animo virtus, et consere dextram.

(iii) demens! qui Rutulum in medio non agmine regem
viderit inrumpentem, ultroque incluserit urbi.

(iv) tum decuit metuisse tuis.

(v) haec ego vasta dabo, et lato te limite ducam.

(vi) te decisa *suum*, Laride, dextera quaerit.

(vii) sinite arma viris et cedite *ferro*.

(viii) ne trepidate meas, Teucri, defendere navis.

(ix) haud sibi cum Danais rem faxo et pube Pelasga
esse *putent*, decumum quos distulit Hector in annum.

(x) simul ora virum praefixa movebant.

(xi) *cuperem* ipse parens spectator adesset.

(xii) haud illi stabunt Aeneia *parvo*
hospitia.

IV. Translate as closely as possible in good English:

(i) Lyncea tendentem contra sociosque vocantem
vibranti gladio connixus ab aggere dexter
occupat; huic uno deiectum comminus ictu
cum galea longe iacuit caput. inde ferarum
vastatorem Amycum, quo non felicior alter
unguere tela manu ferrumque armare veneno;
et Clytium Aeoliden, et amicum Crethea Musis,
Crethea Musarum comitem, cui carmina semper
et citharae *cordi*, numerosque intendere nervis.

(ii) ac velut ille canum morsu de montibus altis
actus aper, multos Vesulus quem pinifer annos
defendit, multosque palus Laurentia, silva
pastus arundinea, postquam inter retia *ventum est*,
substitit, infremuitque ferox et inhorruit armos;
nec cuiquam irasci propiusve accedere virtus,
sed iaculis tutisque procul clamoribus instant.

(iii) Massicus aerata princeps secat aequora Tigri;
sub quo mille manus iuvenum, qui moenia Clusi,
quique urbem liquere Cosas; quis tela sagittae
gorytique leves humeris et letifer arcus.
una torvus Abas; huic totum insignibus armis
agmen et aurato fulgebat Apolline puppis.
sexcentos illi dederat Populonia mater
expertos belli iuvenes; ast Ilva trecentos,
insula inexhaustis Chalybum generosa metallis.

WEDNESDAY, *June* 4, 1884. 1—3½.

VIRGIL, AENEID, BOOKS IX. X. (B)

Questions I. II. III. *may not be left unanswered.*

I. EXPLAIN clearly, in order, the mythological and geographical allusions in all the following passages, and, where possible, give the modern names of the places mentioned.

II. Parse the words in Italics and quote the rules exemplified by their use.

III. Translate and explain, where necessary, the following passages:

(i) hic etiam inventum Priamo narrabis Achillem.

(ii) equidem credo, mea volnera restant.

(iii) quattuor hic iuvenes, totidem, quos *educat* Ufens,
viventis rapit, inferias quos immolet umbris,
captivoque rogi *perfundat* sanguine flammas.

(iv) sed periisse semel satis est.

(v) mox illos *sua* fata manent maiore sub hoste.

(vi) Nisus abit, iamque inprudens evaserat hostis.

(vii) cetera parce, puer, *bello*.

(viii) tenebras et inertia furta
Palladii, *caesis* summae custodibus arcis,
ne timeant, nec equi caeca condemur in alvo.

(ix) ille astu subit; at tremibunda supervolat hasta.

(x) cernat semineci sibi me rapere arma cruenta.
victoremque ferant morientia lumina Turni.

(xi) qualem meruit, Pallanta remitto.

IV. Translate, as closely as possible in good English:

(i) tantane me tenuit vivendi, nate, voluptas,
ut pro me hostili *paterer* succedere *dextrae*,
quem genui? tuane haec genitor per volnera servor,
morte tua vivens? heu, nunc misero mihi demum
exsilium infelix! nunc alte volnus adactum!
idem ego, nate, tuum maculavi crimine nomen,
pulsus ob invidiam solio sceptrisque paternis.
debueram patriae poenas odiisque meorum:
omnis per mortis animam sontem ipse *dedissem*.

(ii) talis in Euboico Baiarum litore quondam
saxea pila cadit, magnis quam molibus ante
constructam ponto iaciunt: sic illa ruinam
prona trahit, penitusque vadis inlisa recumbit;
miscent se maria, et nigrae attolluntur arenae;
tum sonitu Prochyta alta tremit, durumque cubile
Inarime Iovis inperiis inposta Typhoeo.

(iii) hos parere iubent Alpheae ab origine Pisae,
urbs Etrusca solo. sequitur pulcherrimus Astyr,
Astyr equo fidens et versicoloribus armis.
ter centum adiiciunt,—mens omnibus una sequendi—
qui Caerete domo, qui sunt Minionis in arvis,
et Pyrgi veteres, intempestaeque Graviscae.

* * * * * *

hinc quoque quingentos in se Mezentius armat,
quos patre Benaco velatus arundine glauca
Mincius infesta ducebat in aequora pinu.

THURSDAY, *June* 5, 1884. 9—11½.

PLUTARCH. THEMISTOCLES. (A)

Questions 3, 4, 5 *may not be left unanswered.*

1. TRANSLATE:

Παραπλέων δὲ τὴν χώραν ὁ Θεμιστοκλῆς, ᾗπερ κατάρσεις ἀναγκαίας καὶ καταφυγὰς ἑώρα τοῖς πολεμίοις, ἐνεχάραττε κατὰ τῶν λίθων ἐπιφανῆ γράμματα, τοὺς μὲν εὑρίσκων ἀπὸ τύχης, τοὺς δ' αὐτὸς ἱστὰς περὶ τὰ ναυλόχια καὶ τὰς ὑδρείας, ἐπισκήπτων Ἴωσι διὰ τῶν γραμμάτων, εἰ μὲν οἷόν τε, μετατάξασθαι πρὸς αὐτοὺς πατέρας ὄντας καὶ προκινδυνεύοντας ὑπὲρ τῆς ἐκείνων ἐλευθερίας, εἰ δὲ μή, κακοῦν τὸ βαρβαρικὸν ἐν ταῖς μάχαις καὶ συνταράττειν. Ταῦτα δ' ἤλπιζεν ἢ μεταστήσειν τοὺς Ἴωνας ἢ ταράξειν ὑποπτοτέρους τοὺς βαρβάρους γενομένους. Ξέρξου δὲ διὰ τῆς Δωρίδος ἄνωθεν ἐμβαλόντος εἰς τὴν Φωκίδα καὶ τὰ τῶν Φωκέων ἄστη πυρπολοῦντος οὐ προσήμυναν οἱ Ἕλληνες.

Parse in the above passage καταφυγάς, ἐλευθερίας, βαρβαρικόν, ταῦτα, μεταστήσειν.

2. Translate:

Ἀκούσας δ' ὁ Πέρσης ἐκείνῳ μὲν οὐδὲν ἀπεκρίνατο, καίπερ θαυμάσας τὸ φρόνημα καὶ τὴν τόλμαν αὐτοῦ· μακαρίσας δὲ πρὸς τοὺς φίλους ἑαυτόν, ὡς ἐπ' εὐτυχίᾳ μεγίστῃ, καὶ κατευξάμενος ἀεὶ τοῖς πολεμίοις τοιαύτας φρένας διδόναι τὸν Ἀριμάνιον, ὅπως ἐλαύνωσι τοὺς ἀρίστους ἐξ ἑαυτῶν, θῦσαί τε τοῖς θεοῖς λέγεται καὶ πρὸς πόσιν εὐθὺς τραπέσθαι καὶ νύκτωρ ὑπὸ χαρᾶς διὰ μέσων τῶν ὕπνων βοῆσαι τρίς, "Ἔχω Θεμιστοκλέα τὸν Ἀθηναῖον." Ἅμα δ' ἡμέρᾳ συγκαλέσας τοὺς φίλους εἰσῆγεν αὐτὸν μηδὲν ἐλπίζοντα χρηστὸν ἐξ ὧν ἑώρα τοὺς ἐπὶ θύραις ἐγγύς, ὡς ἐπύθοντο τοὔνομα παριόντος αὐτοῦ, χαλεπῶς διακειμένους καὶ κακῶς λέγοντας.

Parse πολεμίοις, θῦσαι.

3. Translate:

(*a*) Τὸ γὰρ Φλυῆσι τελεστήριον, ὅπερ ἦν Λυκομιδῶν κοινόν, ἐμπρησθὲν ὑπὸ τῶν βαρβάρων αὐτὸς ἐπεσκεύασε καὶ γραφαῖς ἐκόσμησεν, ὡς Σιμωνίδης ἱστόρηκεν.

Explain the words Φλυῆσι, τελεστήριον. Who were the βάρβαροι mentioned?

(*b*) Οὐ μὴν ἀλλὰ τοῖς πολλοῖς ἐνήρμοττε, τοῦτο μὲν ἑκάστου τῶν πολιτῶν τοὔνομα λέγων ἀπὸ στόματος, τοῦτο δὲ κριτὴν ἀσφαλῆ περὶ τὰ συμβόλαια παρέχων ἑαυτόν.

Explain τὰ συμβόλαια. What is the construction of τοῦτο μὲν—τοῦτο δέ?

(*c*) Καὶ γὰρ τρέφειν ἐψηφίσαντο δημοσίᾳ, δύο ὀβολοὺς ἑκάστῳ δίδοντες, καὶ τῆς ὀπώρας λαμβάνειν τοὺς παῖδας ἐξεῖναι πανταχόθεν.

Of whom is Plutarch speaking here? Explain the construction of τῆς ὀπώρας.

(*d*) Εἰ δ' ἄπιτε δεύτερον ἡμᾶς προδόντες, αὐτίκα πεύσεταί τις Ἑλλήνων Ἀθηναίους καὶ πόλιν ἐλευθέραν καὶ χώραν οὐ χείρονα κεκτημένους ἧς ἀπέβαλον.

Who is the speaker, and what does he imply? Parse ἧς.

(*e*) Μετὰ δὲ τὴν ναυμαχίαν Ξέρξης μὲν ἔτι θυμομαχῶν πρὸς τὴν ἀπότευξιν ἐπεχείρει διὰ χωμάτων ἐπάγειν τὸ πεζὸν τοῖς Ἕλλησιν εἰς Σαλαμῖνα.

Explain χωμάτων. Parse Ἕλλησιν.

(*f*) Ἐν δὲ τῇ τότε τύχῃ μᾶλλον ὁ Θεμιστοκλῆς φοβηθεὶς συγγενῆ καὶ πρόσφατον φθόνον ὀργῆς παλαιᾶς καὶ βασιλικῆς, ταύτῃ φέρων ὑπέθηκεν ἑαυτόν.

To what persons do the expressions συγγενῆ φθόνον, ὀργῆς βασιλικῆς refer?

(*g*) Ὦ Θεμιστόκλεις, ὑστέρει κεφαλῆς λεόντων, μὴ λέοντι περιπέσῃς.

Explain the meaning and occasion of this speech.

4. Translate and briefly explain, where necessary, the following words and phrases:

οὐ Δαρεῖον ἐπισείων—μεθ' ἡμέραν—τῶν Ἀθηναίων ἐπὶ πᾶσι τεταγμένων—γλαῦκα τοῖς καρχησίοις ἐπικαθίζουσαν—ἐν τοῖς Ἀμφικτυονικοῖς συνεδρίοις—οἱ τριάκοντα—Ζεὺς Δωδωναῖος—οἱ μαγικοὶ λόγοι.

5. Who were Artemisia, Eurybiades, Abrotonum? Where were Artemisium, Lampsacus, Aegina? Quote any allusions in this book to these persons and places.

THURSDAY, *June* 5, 1884. 9—11½.

PLUTARCH. THEMISTOCLES. (B)

Questions 3, 4, 5 *may not be left unanswered.*

1. TRANSLATE:

Ἔνθα δὴ Θεμιστοκλῆς ἀπορῶν τοῖς ἀνθρωπίνοις λογισμοῖς προσάγεσθαι τὸ πλῆθος, ὥσπερ ἐν τραγῳδίᾳ μηχανὴν ἄρας, σημεῖα δαιμόνια καὶ χρησμοὺς ἐπῆγεν αὐτοῖς· σημεῖον μὲν λαμβάνων τὸ τοῦ δράκοντος, ὃς ἀφανὴς ἐκείναις ταῖς ἡμέραις ἐκ τοῦ σηκοῦ δοκεῖ γενέσθαι· καὶ τὰς καθ' ἡμέραν αὐτῷ προτιθεμένας ἀπαρχὰς εὑρίσκοντες ἀψαύστους οἱ ἱερεῖς ἐξήγγελλον εἰς τοὺς πολλούς, τοῦ Θεμιστοκλέους λόγον διδόντος, ὡς ἀπολέλοιπε τὴν πόλιν ἡ θεὸς ὑφηγουμένη πρὸς τὴν θάλατταν αὐτοῖς. τῷ δὲ χρησμῷ πάλιν ἐδημαγώγει, λέγων μηδὲν ἄλλο δηλοῦσθαι ξύλινον τεῖχος ἢ τὰς ναῦς, διὸ καὶ τὴν Σαλαμῖνα θείαν, οὐχὶ δεινὴν οὐδὲ σχετλίαν ἀνακαλεῖν τὸν θεόν, ὡς εὐτυχήματος μεγάλου τοῖς Ἕλλησιν ἐπώνυμον ἐσομένην.

Parse in the above passage:

πλῆθος, ἄρας, ἀψαύστους, διδόντος, αὐτοῖς.

2. Translate:

Ἐμοὶ μὲν οὖν πάντα πρέποντα ταῖς παρούσαις συμφοραῖς ἐστι, καὶ παρεσκευασμένος ἀφῖγμαι δέξασθαί τε χάριν εὐμενῶς διαλλαττομένου καὶ παραιτεῖσθαι μνησικακοῦντος ὀργήν· σὺ δὲ τοὺς ἐμοὺς ἐχθροὺς μάρτυρας θέμενος ὧν

εὐεργέτησα Πέρσας, νῦν ἀπόχρησαι ταῖς ἐμαῖς τύχαις πρὸς ἐπίδειξιν ἀρετῆς μᾶλλον ἢ πρὸς ἀποπλήρωσιν ὀργῆς. Σώσεις μὲν γὰρ ἱκέτην σόν, ἀπολεῖς δ' Ἑλλήνων πολέμιον γενόμενον. ταῦτ' εἰπὼν ὁ Θεμιστοκλῆς ἐπεθείασε τῷ λόγῳ προσδιελθὼν τὴν ὄψιν, ἣν εἶδεν ἐν Νικογένους, καὶ τὸ μάντευμα τοῦ Δωδωναίου Διός.

Parse ὧν, ἀπόχρησαι.

3. Translate:

(*a*) Πίνακα τῆς νίκης ἀνέθηκε τοιαύτην ἐπιγραφὴν ἔχοντα· "Θεμιστοκλῆς Φρεάρριος ἐχορήγει, Φρύνιχος ἐδίδασκεν, Ἀδείμαντος ἦρχεν."

What is the construction of τῆς νίκης? Explain the meaning of the words Φρεάρριος, ἐχορήγει, ἐδίδασκεν, ἦρχεν.

(*b*) Ἐξωστράκιστο γὰρ πρὸ τοῦ πολέμου καταστασιασθεὶς ὑπὸ Θεμιστοκλέους.

Who is spoken of? Parse and explain the meaning of ἐξωστράκιστο.

(*c*) Χρυσοῦν δίφρον θέμενος καὶ γραμματεῖς πολλοὺς παραστησάμενος, ὧν ἔργον ἦν ἀπογράφεσθαι τὰ κατὰ τὴν μάχην πραττόμενα.

Who is spoken of? Explain the construction of δίφρον θέμενος.

(*d*) Καὶ πεῖραν ἡ Θεμιστοκλέους καὶ Ἀριστείδου φρόνησις ἐν Μαρδονίῳ παρέσχεν, εἴγε πολλοστημορίῳ τῆς Ξέρξου δυνάμεως διαγωνισάμενοι Πλαταιᾶσιν εἰς τὸν περὶ τῶν ὅλων κίνδυνον κατέστησαν.

What event is alluded to in this passage? Parse Πλαταιᾶσιν.

(*e*) Φαίνεταί τις οὐ τὴν ψυχὴν μόνον, ἀλλὰ καὶ τὴν ὄψιν ἡρωϊκὸς γενόμενος.

Of what circumstance in connection with Themistocles is Plutarch here speaking?

(*f*) Τοῖς δὲ χρονικοῖς δοκεῖ μᾶλλον ὁ Θουκυδίδης συμφέρεσθαι, καίπερ οὐδ' αὐτοῖς ἀτρέμα συντεταγμένοις.

(*g*) Ὦ παῖδες, ἀπωλόμεθα ἄν, εἰ μὴ ἀπωλόμεθα.

Explain the meaning and occasion of this remark.

4. Translate and briefly explain, where necessary, the following words and phrases:

ἀποκηρύξιν ὑπὸ τοῦ πατρὸς—προσωφλίσκανεν ἀλαζονείαν—ἐμφῦναι ταῖς ναυσίν—τὸ Γοργόνειον—τῶν νεκρῶν τοὺς ἐκπεσόντας—παρακρουσάμενος τοὺς ἐφόρους—οἱ Πυλάγοραι—τὸ βῆμα τὸ ἐν Πνυκί.

5. Who were Aminias, Admetus, Timocreon of Rhodes? Where were Troezen, Magnesia, Piraeus? Quote any allusions in this book to these persons and places.

THURSDAY, *June* 5, 1884. 1—3½.

GREEK AND LATIN GRAMMAR. (A)

1. DECLINE in the singular *Θεμιστοκλῆς, θάλασσα*: in the plural *βασιλεύς, ναῦς*.

What is the gender of *τριήρης, ναυβάτης, κρέας, λίθος*? Give their datives singular and plural.

2. Decline in the singular mare, heros: in the plural viscus, deus.

What is the gender of chalybs, funis, anser? Give their accusative singular.

3. Write down the accusative and dative singular of *πολύς, μέγας*: the accusative and dative plural of *ἐλθών, χαλεπός, ἐγώ*.

Give the comparative and superlative of *στενός, ταχύς, κακός*.

4. Write down the accusative and dative singular of facilis, ipse, ales, totus: the accusative and dative plural of qui, ego, ruber.

Give the comparative and superlative of celer, audax, dives.

5. Write down the 3rd sing. perf. indic. Act. of *εἴκω*: 3rd sing. pres. opt. Act. of *ἐάω*: 1st sing. 1st aor. indic. Act. of *μεθίστημι*: nom. masc. 2nd aor. part. Pass. of *ἐκπλήσσω*: nom. masc. 1st aor. part. Pass. of *διδάσκω*: 3rd sing. perfect indic. Act. of *φύω*: 3rd sing. imperf. Act. of *ἐπιχειρέω*: 1st sing. perf. indic. of *ἀφικνέομαι*.

6. Write down the 3rd sing. 1st fut. indic. Pass. of do: 1st sing. plup. indic. Act. of gigno: nom. sing. perf. part. of exordior: nom. sing. perf. part. Pass. of sepelio: 3rd sing. 2nd fut. indic. Act. of evado.

7. Parse and give the English of *ἐῤῥιμμένας, μιᾷ, ὁμοῦ, ὑστέρει, δηχθείς*, egēret, adegit, ultro, pone, soli.

8. (*α*) Parse *ἥκειν, θεούς, Βίαν*, explaining their construction in the sentence:
Δύο γὰρ ἥκειν ἔφη θεοὺς κομίζων, Πειθὼ καὶ Βίαν.

(*β*) Parse fugae, pelagus, petemus, explaining their construction in the sentence:
"Deest iam terra fugae: pelagus Troiamne petemus?"

THURSDAY, *June* 5, 1884. 1—3½.

GREEK AND LATIN GRAMMAR. (B)

1. DECLINE in the singular Ἀριστείδης, χώρα: in the plural πόλις, Ἕλλην.
What is the gender of χείρ, μέρος, ὕδωρ, ψῆφος?
Give their datives singular and plural.

2. Decline in the singular sidus, manus: in the plural frater, auster.
What is the gender of alvus, cortex, crater? Give their accusative singular.

3. Write down the accusative and dative singular of πᾶς, μέλας: the accusative and dative plural of ἑκών, ἄπειρος, σύ.
Give the comparative and superlative of φίλος, μέγας, πολύς.

4. Write down the accusative and dative singular of felix, iste, alacer, uter: the accusative and dative plural of idem, tu, omnis.
Give the comparative and superlative of arduus, pulcher, dissimilis.

5. Write down the 3rd sing. perf. indic. Act. of πράσσω: pres. infin. Act. of φοιτάω: 3rd plur. imperf. indic. Act. of προσέχω: 1st aor. infin. Mid. of ἅπτομαι: nom. sing. 1st aor. part. Pass. of κομίζω: nom. sing. 1st aor. part. Act. of σημαίνω: 1st plur. 1st aor. subj. Act. of κλείω: 3rd plur. perf. indic. Act. of πήγνυμι.

6. Write down the 3rd sing. 1st fut. indic. Pass. of augeo: 1st sing. plup. indic. Act. of figo: nom. sing. perf. part. of connitor: nom. sing. perf. part. Pass. of findo: 3rd sing. 2nd fut. indic. Act. of maneo.

7. Parse and give the English of ὑποθείς, τῷδε, ὅμως, ἐδόκει, λεχθῆναι, faxo, ediderit, olim, penitus, toto.

8. (α) Parse εἶναι, θεούς, πενίαν, explaining their construction in the sentence:
οἱ δ' ἔφασαν εἶναι καὶ παρ' αὐτοῖς θεοὺς μεγάλους δύο, Πενίαν καὶ Ἀπορίαν.

(β) Parse caelo, se, misit, explaining their construction in the sentence:
"Caelo se protinus alto misit."

FRIDAY, *June* 6, 1884. 1—3½.

ADDITIONAL ALGEBRA. (A)

1. A GROCER buys equal quantities of tea at 3*s.* and 2*s.* 6*d.* per lb. If he had divided his money equally between the two kinds he would have bought one lb. of tea more.

What amount did he buy, and how much did he spend?

2. A man starts to walk a certain distance in a certain time, but, being obliged, after a time, to diminish his pace by one-fifth, he is 4 minutes late. If he had walked another mile before diminishing his pace, he would have been only one minute late. What was his original pace, and how far from the end of his journey did he slacken his speed?

3. Three squares of ground, the lengths of whose sides are in Arithmetical Progression, are paved with square tiles of equal size. In the two smaller squares together there are 45 tiles more than in the largest; and if there were 9 tiles more in the middle square the numbers of tiles in the three would be in Arithmetical Progression.

How many tiles are there in each square?

4. Find the sum of an Arithmetical Progression of n terms, whose first and last terms are a and l.

5. Sum the series $122+109+96$.....to 11 terms.

What is the last term?

6. Find the sum of n terms of the series whose rth term is $(-a)^r$.

7. (1) Sum the series $\sqrt{3}-\sqrt{2}+\frac{2}{\sqrt{3}}-$.....to 10 terms.

(2) The first term of a Geometrical Progression is 5, and its sum to infinity is 4. Find the sum of the first 5 terms.

8. Prove that

$$\log_a N = \log_a b \log_b N.$$

Find logarithm of $\sqrt{5}$ to base ·008.

9. Having given

$$\log_{10} 4 = \cdot 6020600,$$
$$\log_{10} 6 = \cdot 7781513,$$

find $\log_{10} 1\frac{5}{27}$ and $\log_{10} \sqrt[3]{\frac{5}{12}}$.

10. With the data in the last question, and having given

$$\log_{10} 18881 = 4\cdot 2760250,$$
$$\log_{10} 18882 = 4\cdot 2760480,$$

find $\sqrt[5]{24}$ to 6 places of decimals.

FRIDAY, *June* 6, 1884. 1—3½.

ADDITIONAL ALGEBRA. (B)

1. A GROCER buys equal quantities of tea at 2*s.* 6*d.* and 2*s.* per lb. If he had divided his money equally between the two kinds he would have bought one lb. of tea more.

What sum did he spend, and how much tea did he buy?

2. A man starts to walk a certain distance in a certain time, but, being obliged, after a time, to diminish his pace by one-ninth, he is 3 minutes late. If he had walked another mile before diminishing his pace, he would have been only $1\frac{1}{3}$ minutes late. What was his original pace, and how far from the end of his journey did he slacken his speed?

3. Three squares of ground, the lengths of whose sides are in Arithmetical Progression, are paved with square tiles of equal size. There are 28 tiles in the largest square more than in the other two together; and if there were 16 tiles more in the middle square the numbers of tiles in the three would be in Arithmetical Progression.

How many tiles are there in each square?

4. Find the sum of an Arithmetical Progression of n terms, whose first term is a and common difference b.

5. Sum the series $133 + 119 + 105 \ldots\ldots$ to 11 terms? What is the last term?

6. Find the sum of n terms of the series whose rth term is $(-a)^r$.

7. Sum the series $\sqrt{2} - \sqrt{3} + \frac{3}{\sqrt{2}} - \ldots\ldots\ldots$ to 10 terms.

The first term of a Geometrical Progression is 4 and its sum to infinity is 3. Find the sum of the first 5 terms.

8. Prove that

$$\log_a N = \frac{1}{\log_b a} \log_b N.$$

Find logarithm of $\sqrt[3]{5}$ to base ·04.

9. Having given

$$\log_{10} 3 = \cdot 4771213,$$
$$\log_{10} 5 = \cdot 6989700,$$

find $\log_{10} 1\frac{2}{15}$ and $\log_{10} \sqrt{1\frac{5}{27}}$.

10. With the data in the last question, and having given

$$\log_{10} 17187 = 4\cdot 2352001,$$
$$\log_{10} 17188 = 4\cdot 2352253,$$

find $\sqrt[5]{15}$ to 6 places of decimals.

SATURDAY, *June* 7, 1884. 9—11½.

TRIGONOMETRY. (A)

1. SHEW how to find the circular measure of an angle which is given in degrees, minutes and seconds.

Find the circular measure of $2^\circ\ 13'\ 10''$.

2. Define the tangent and secant of an angle and prove that

$$\sec^2 A = 1 + \tan^2 A.$$

Prove that

$$\{\sqrt{\sec A + \tan A} + \sqrt{\sec A - \tan A}\}^2 = 2\,(1 + \sec A).$$

3. Find the value of $\sin 60^\circ$.

Find all the angles less than two right angles which satisfy the equation

$$\sec^4 A - 6 \sec^2 A + 8 = 0.$$

4. Investigate an expression for all angles which have the same cosecant.

5. Prove

(1) $\sin(A+B) = \sin A \cos B + \cos A \sin B$; $A + B$ being $< 90^\circ$,

(2) $\cos A + \cos B = 2 \cos \frac{1}{2}(A+B) \cos \frac{1}{2}(A-B)$,

(3) $\sin 85^\circ = \cos 55^\circ + \sin 25^\circ$,

(4) $\cos A - \cos B - \sin(A-B) = 2 \sin \frac{1}{2}(B-A)(\sin \frac{1}{2} A + \cos \frac{1}{2} A)(\sin \frac{1}{2} B + \cos \frac{1}{2} B)$.

6. Prove that

$$\sin \frac{A}{2} = \pm \sqrt{\frac{1 - \cos A}{2}}.$$

Which sign of the root is to be taken if $A > 270^\circ < 360^\circ$?

7. Find an expression for the cosine of an angle of a triangle in terms of the sides.

Prove that

$$\frac{\cos A}{b} - \frac{\cos B}{a} = \frac{\cos C}{c}\left\{\frac{\sin B}{\sin A} - \frac{\sin A}{\sin B}\right\}.$$

8. Prove the formula

$$\cos \frac{B}{2} = \sqrt{\frac{s\,(s-b)}{ac}}.$$

9. In a triangle $a = 432$, $b = 324$, $C = 67^\circ\ 58'\ 32''$, find A, B, and c having given

$$\log 7 = \cdot 8450980,$$

$$L \cot 33^\circ\ 59' = 10\cdot 1712851, \quad \text{diff. for } 1' = 2700,$$

$$L \tan 11^\circ\ 57' = 9\cdot 3256073, \quad \text{diff. for } 1' = 6270.$$

SATURDAY, *June* 7, 1884. 9—11½.

TRIGONOMETRY. (B)

1. SHEW how to find the number of degrees, minutes and seconds in an angle whose circular measure is given.

Express in degrees, minutes and seconds the angle $\frac{5\pi}{324}$.

2. Define the cosecant and cotangent of an angle and prove that

$$\cot^2 A = \operatorname{cosec}^2 A - 1.$$

Prove that

$$\{\sqrt{\operatorname{cosec} A + \cot A} - \sqrt{\operatorname{cosec} A - \cot A}\}^2 = 2(\operatorname{cosec} A - 1).$$

3. Find the value of $\sin 45°$.

Find all the angles less than two right angles which satisfy the equation

$$\tan^4 A - 4\tan^2 A + 3 = 0.$$

4. Investigate an expression for all angles which have the same secant.

5. Prove

(1) $\cos(A+B) = \cos A \cos B - \sin A \sin B$; $A+B$ being $< 90°$,

(2) $\sin A + \sin B = 2\sin\frac{1}{2}(A+B)\cos\frac{1}{2}(A-B)$,

(3) $\cos 3° = \sin 33° + \cos 63°$,

(4) $\cos A + \cos B - \sin(A+B) = 2\cos\frac{1}{2}(A+B)(\cos\frac{1}{2}A - \sin\frac{1}{2}A)(\cos\frac{1}{2}B - \sin\frac{1}{2}B)$.

6. Prove that

$$\cos\frac{A}{2} = \pm\sqrt{\frac{1+\cos A}{2}}.$$

Which sign of the root is to be taken if $A > 180° < 270°$?

7. In any triangle the sides are proportional to the sines of the opposite angles. Prove that

$$\frac{\cos A}{a} - \frac{\cos B}{b} = \frac{1}{c}\left\{\frac{\sin B}{\sin A} - \frac{\sin A}{\sin B}\right\}.$$

8. Prove the formula

$$\sin\frac{B}{2} = \sqrt{\frac{(s-a)(s-c)}{ac}}.$$

9 If $a = 378$, $b = 54$, $C = 85° 54' 14''$, find A, B, and c having given

$$\log 2 = \cdot 3010300, \quad \log 3 = \cdot 4771213,$$
$$L\cot 42° 57' = 10\cdot 0311040, \quad \text{diff. for } 1' = 2538,$$
$$L\tan 38° 51' = 9\cdot 9060431, \quad \text{diff. for } 1' = 2586.$$

SATURDAY, *June* 7, 1884. 1—3½.

STATICS. (A)

1. DEFINE force. With what convention may a force be represented by a straight line? Mention different units of force which have been employed.

2. Explain the meaning of the term resultant force. If three forces represented by P, P and Q act at a point in directions such that each force is equally inclined to the directions of the other two, shew without using the parallelogram of forces that the resultant of the forces is $Q-P$.

3. State the parallelogram of forces, and prove it so far as the direction of the resultant is concerned for two forces $3P$ and $5P$.

If a given force acting at a given point in a given direction be resolved into two equal forces, prove that the extremities of the lines representing these equal forces always lie on a certain straight line.

4. Find the magnitude and the line of action of the resultant of two parallel forces which act in opposite directions.

Prove that the forces represented by the diagonals of a parallelogram are equivalent to the forces represented by one or other of the pairs of opposite sides of the parallelogram.

5. Define the term centre of gravity. Shew how to determine the centre of gravity of any number of heavy particles, situated at given points in a plane.

If there be a number of heavy particles situated at given fixed points, and another heavy particle move along a given straight line, prove that the centre of gravity of the whole system will also move along a certain straight line.

6. Find the ratio of the power to the weight in the smooth inclined plane and the pressure upon the plane, when the power acts parallel to the base.

In what direction must the power act that it may be the least possible? Prove that the weight is a geometric mean between the pressure on the plane in this case, and the pressure when the power acts parallel to the base.

7. Prove that the moment of the resultant of two forces which act upon a point about any point in the plane of the forces is equal to the algebraical sum of the moments of the forces about the same point.

8. Find the condition of equilibrium, in the system of pulleys in which the strings are parallel, and one end of each is attached to the lower block.

If there be four moveable pulleys each weighing 1 lb., and the weight supported be 3 cwt., find the power.

9. Describe the common steelyard, and explain the mode of graduating it.

If a steelyard by use lose one-tenth of its weight, the centre of gravity of the steelyard remaining unaltered, shew how to correct the graduation of the steelyard.

SATURDAY, *June* 7, 1884. 1—3½.

STATICS. (B)

1. DEFINE a force. What is meant by the line of action of a force? What is the principle of the transmission of force?

Shew that forces may be represented by straight lines.

2. Explain the meaning of the terms resultant and component forces. Resolve a force $8P$ into two forces each of which shall be equal to $5P$, and find the sine of the angle between the equal components.

3. State the parallelogram of forces, and assuming its truth for the direction of the resultant, prove it for the magnitude of the resultant.

If a given force acting at a given point in a given direction be resolved into two component forces whose directions are always at right angles to each other, prove that the extremities of the lines representing those component forces will always lie on the circumference of a circle.

4. State and prove the polygon of forces.

If three forces be represented by the sides of a triangle taken in order, shew that they are equivalent to two equal and opposite parallel forces.

5. Find the magnitude and line of action of the resultant of two parallel forces which act at given points in the same direction.

Prove that the forces represented by one or other of the pairs of opposite sides of a parallelogram, the forces acting in the same direction, are equivalent to the forces represented by the diagonals.

6. Define the term centre of gravity. Shew how to determine the centre of gravity of a plane triangular lamina of uniform thickness and density.

If the base of a triangle be fixed, and its vertex always lie in a straight line, the centre of gravity of the triangle will also lie in a certain straight line.

7. Find the condition of equilibrium when a weight is supported on a smooth inclined plane by a force acting parallel to the plane.

Find the direction in which the power must act, in order that there may be equilibrium when the power is equal to the weight, and shew that the pressure upon the plane in this case is double the pressure upon the plane in the former case.

8. Prove that the moment of the resultant of two parallel forces which act in opposite directions about any point in the plane of the forces is equal to the algebraical sum of the moments of the forces about the same point.

9. Find the condition of equilibrium in that system of pulleys in which the strings are parallel, and one end of each is attached to the upper block.

If there be four pulleys the weight of each of which is 1 lb., and the weight supported be 81 lbs., find the power.

ANSWERS.

GENERAL EXAMINATION.

TUESDAY, *May* 27, 1884.

HYDROSTATICS AND HEAT. (A.) (Page 569.)

2. 500 ounces. 3. 500 ounces. 4. 8·5 and ·85.
6. 42 feet 1 inch. 7. 174°. 8. 19° C. 9. 42, ·12.
11. The same reading on both. 12. Specific gravity of water will increase, that of ball will decrease; consequently ball will *rise*.

HYDROSTATICS AND HEAT. (B.) (Page 571.)

2. One vertical branch will contain the oil; the other branch and the horizontal part the water. 3. 1000 ounces. 4. ·25.
6. 33 feet 4 inches. 7. 119°. 8. 2 inches higher in the tube than before. 9. 25, ·12. 12. Specific gravity of water will decrease, that of ball will increase; consequently ball will *sink*.

WEDNESDAY, *May* 28, 1884.

ALGEBRA. (A.) (Page 578.)

1. (i) $x=3$; (ii) $x=ab$; (iii) $x=\frac{3}{2}$, $y=\frac{5}{2}$; (iv) $x=\frac{3}{4}$ or $-\frac{3}{5}$.
2. £14. 8*s*. 3. 13 miles and 10 miles.
4. (i) $x=\frac{a+2b}{a}$ or $\frac{a-2b}{b}$; (ii) $x=25$; (iii) $x=2$ or $\frac{1}{4}$, $y=1$ or $\frac{11}{4}$.
5. $2b^2=9ac$. 6. £1200 at 3 per cent.; £1800 at 4 per cent.
8. 2 and 18. 9. 32 : 25. 10. 10. 11. (i) 81·6; (ii) 910; (iii) $35\frac{55}{99}$.

ALGEBRA. (B.) (Page 579.)

1. (i) $x=4$; (ii) $x=mn$; (iii) $x=\frac{3}{2}$, $y=\frac{5}{3}$; (iv) $x=\frac{3}{5}$ or $-\frac{5}{4}$.
2. £12. 15*s*. 3. 12 miles and 10 miles.
4. (i) $x=\frac{2a+b}{a}$ or $\frac{2a-b}{b}$; (ii) $x=25$; (iii) $x=1$ or $\frac{5}{4}$, $y=2$ or $\frac{7}{4}$.
5. $2b^2=9ac$. 6. £800 at 3 per cent.; £1200 at 4 per cent.
8. 3 and 12. 9. 9 : 4. 10. 10 or 20.
11. (i) 76·2; (ii) 682; (iii) $25\frac{55}{99}$.

PREVIOUS EXAMINATION.

TUESDAY, *June* 3, 1884.

ARITHMETIC. (A.) (Page 587.)

1. £300. 2*s*. 6*d*. 2. £711. 11*s*. 3*d*. 3. 40 inches.
4. (*a*) $241\frac{5}{8}$; (*β*) 32. 5. £23296. 5*s*. $3\frac{3}{4}$*d*. 6. £433. 4*s*. 10*d*.
7. (*a*) $\frac{9}{100}$; (*β*) $\cdot 96510416$. 8. (*a*) £11. 9*s*. $1\frac{11}{36}$*d*.; (*β*) £14. 17*s*. $0\frac{7}{10}$*d*.
9. $\frac{1}{6}$. 10. 2 guineas.

ARITHMETIC. (B.) (Page 588.)

1. £300. 2*s*. $2\frac{1}{4}$*d*. 2. 460. 3. $24\frac{3}{4}$ miles. 4. (*a*) $339\frac{31}{80}$; (*β*) 42.
5. £12558. 8*s*. $1\frac{1}{2}$*d*. 6. £324. 18*s*. $7\frac{1}{2}$*d*. 7. (*a*) $\frac{1}{156}$; (*β*) $1\cdot 2586805$.
8. (*a*) £11. 15*s*. $10\frac{41}{56}$*d*.; (*β*) £6. 17*s*. $8\frac{1}{10}$*d*. 9. £235. 10. £3. 3*s*. $1\frac{1}{2}$*d*.

TUESDAY, *June* 3, 1884.

ELEMENTARY ALGEBRA. (A.) (Page 578.)

1. (*a*) $30a-30b+46c$; (*β*) $4(6^2-ac)$. (2) (*a*) $(x-11y)(x-6y)$; (*β*) $(a-b+4c)(a+b-4c)$; (*γ*) $y(x-y)(2x^2+xy+y^2)$. 3. $x-8$.
5. (*a*) $\frac{1}{4x}-\frac{x}{3y}$; (*β*) $3x^2-4xy+4y^2$. 6. (*a*) $x=10$; (*β*) $y=5$, $x=2$.
8. (*a*) $x=4$ or 8; (*β*) $x=\pm(p+q)$, $y=\pm 1$, or $x=\pm q$, $y=\pm\frac{p+q}{q}$. 10. $\frac{ab}{a+b}$.
11. $4\frac{1}{14}$.

ELEMENTARY ALGEBRA. (B.) (Page 579.)

1. (*a*) $40(a-b+c)$; (*β*) a^2+c^2. (*a*) $(x-11y)(x-8y)$; (*β*) $(a-b+3c)(a+b-3c)$; (*γ*) $-y(x+y)(2x^2-xy+y^2)$. 3. $x-9$.
5. (1) $\frac{1}{3x}-\frac{x}{2y}$; (2) $3x^2-2xy+y^2$. 6. (*a*) $x=9$; (*β*) $x=\frac{2}{3}$, $y=2\frac{1}{4}$.
8. (*a*) $x=8$ or 9; (*β*) $x=\pm(p-q)$, $y=1$, or $x=\pm q$, $y=\pm\frac{p-q}{q}$.
9. $x-x^{\frac{1}{2}}y^{\frac{1}{2}}+y$. 10. $\frac{ab}{a^2+ab+b^2}$. 11. 4.

FRIDAY, *June* 6, 1884.

ADDITIONAL ALGEBRA. (A.) (Page 600.)

1. 120 lbs. £8. 5*s*. 2. 5 miles an hour. $1\frac{1}{3}$ miles. 3. 144, 225, 324.
5. 627, -8. 6. $\frac{a\{(-a)^n-1\}}{a+1}$. 7. $\frac{211}{81}(\sqrt{3}-\sqrt{2})$; $4\frac{1}{156}$. 8. $-\frac{1}{6}$.
9. $\cdot 0737861$; $\bar{1}\cdot 8732629$. 10. $1\cdot 888175$.

ADDITIONAL ALGEBRA. (B.) (Page 601.)

1. £9. 80 lbs. 2. $4\frac{1}{2}$ miles an hour. $1\frac{1}{5}$ miles. 3. 100, 196, 324.
5. 693, -7. 6. $\frac{a^3\{(-a)^{2n}-1\}}{a^3+1}$. 7. $-\frac{211}{16}(\sqrt{3}-\sqrt{2})$; $3\frac{1}{81}$. 8. $-\frac{1}{6}$.
9. $\cdot 0334239$, $\cdot 0368931$. 10. $1\cdot 718772$.

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